The Builder.

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Architecture in Landscape.

ONE of the most thoughtful and profound philosophers of our day, Mr. Herbert Spencer, has in his miscellaneous essays travelled a little out of his usual paths of speculation, to give us his thoughts on the picturesque in architecture. The short essay on the subject was suggested, he tells his readers, by hearing at a water-colour exhibition the remark, "How unpicturesque!" applied to a certain drawing, which had previously struck himself in the same light. On considering the drawing in question, and having assumed the "unpicturesqueness" as proved by this *consensus* of opinions, he came to the conclusion that this defect arose from the fact that a building in the "Classic" style, with regular unbroken horizontal lines, was combined in the composition with a broken and irregular landscape. The lines of the building did not harmonise in style and character with those of the landscape, and the result was as aforesaid; upon which premises the writer bases some further considerations on the general conditions of the picturesque in architecture, not altogether to the purpose.

It is always interesting to meet with original opinions on any branch of art from men who have thought deeply on other subjects, and who frame their opinions entirely independently of fashion. But the instance we have alluded to is one out of many illustrations of the fact that, even to minds of exceptional power and breadth of information, some special training is requisite to enable them to appreciate fully the subtle and delicate distinctions involved in questions of this nature. If Mr. Spencer was right in his deduction, the Acropolis ought certainly to be a most unpicturesque subject; and Gaspar Poussin and other artists, who were fond of introducing architecture into their landscapes, must have grievously erred in their critical judgment, as well as the numbers who have admired their compositions. Art criticism may often be in want of more philosophy; but it is equally true that philosophy will not make art-critics.

In fact, the general sense of painters and students of the picturesque has decided, in the main, in favour of almost the opposite principle in combining landscape and architecture, to that to which we have alluded. Tacitly, at least, it has been felt that the simple, regular lines of Classic or Italian architecture gain in effect in combination with that kind of broken and irregular, but not too wild, landscape, which we generally call picturesque, and the effect of which (in painting) is, in turn, enhanced by the presence of the architecture. We regard architecture in a picture as something distinct from the landscape, appealing to a different class of associations, and resting upon entirely different qualities for its effect. As compared with nature, it is the distinctive character of architecture to be regular and symmetrical: that is the kind of charm peculiar to it, and which, therefore, when architecture is used as an accessory to pictorial effect, we like to see emphasised and brought out,—in regard, at least, to the main lines of the structure introduced. The painter may indeed represent the buildings he introduces as abraded and discoloured by time, for it is only thus that he can avoid the aspect of newness and recent introduction on the scene, which would, in most cases, clash with the feeling of his picture, destroying its repose by suggesting the immediate presence of the mason and his staff, and depriving the scene of the charm of association belonging to that which has remained long unchanged, and survived many vicissitudes of time and season. So far the painter may endeavour to harmonise his architectural adjuncts with the feeling of this landscape; but further than this both painter and architect will be wise not to attempt to bring the lines of their architecture so far into similarity with those of the landscape as to make the former appear in any degree to compete with the latter. Architecture should stand as a contrast to, not as a reduplication of, the character of the landscape. Where we have the variety and irregularity of outline and detail in nature, in broken ground and woodland scenery, there we look for the symmetrical repose of architecture as a foil to the landscape. We do not want budding crockets and finials, wild and piled-up outlines, and masses of building, where there are the more varied growths and the larger outlines of nature to throw such attempts on the part of architecture into the shade. A very distinguished church architect certainly attempted, in a church built in the lake district, to make the architecture harmonise with the mountains, by providing a tower and spire of exceptional and disproportionate size and massiveness. But the attempt is not a success: its purpose is evident, and the futility of the result equally so. What we can realise, in such scenery, is the contrast between the varying and undulating outlines of nature and the sober, artificial repose of building. And on the converse principle it is that Gothic architecture, in its richer and more ornate developments, is pre-eminently the architecture of towns, both historically and æsthetically. Where we have no hills and trees to compete with our buildings, we can afford in them to give the rein to fancy, and we find a pleasure and relief from the otherwise dreary monotony of formal streets, in playing with the outlines and details of the architecture, and seeking from it some of that variety of line and of light and shade which in the country is supplied by nature. Almost all landscape painters have felt this instinctively. A Gothic church, with its spire and pinnacle and crockets, would add nothing, in most cases, to a landscape, and would be felt, if worked out at all in detail, rather as an intruder in the composition. The painter seeks mainly for broad, heavy masses of light and shadow in his buildings, and is rather troubled than otherwise with elaborate detail. When, however, the landscape gets beyond the limits of the picturesque into those of the wild and grand, there is another change required in the treatment of architecture, which is to be combined with it. We cannot place the amenities of Classic architecture as a feature in scenery of this description; they would be lost and overpowered; the contrast between the scene and the building amounting in this case, not merely to opposition of character, but to absolute discrepancy of sentiment and association. The Greek temple, contrasting as it does in line with the irregularity of an ordinarily picturesque landscape, is in harmony with it in sentiment; neither overpowers the other. But the Greek temple would be lost and insignificant amid the gloomy grandeur of Glencoe or similar scenes. In such scenes we require still further to denude architecture of her attempt to vie in interest with nature. We must reduce the architecture to its broadest, simplest, most unpretending and yet most durable form, in order to prevent its appearing either an impertinence or a feebleness amid those great forces of nature. Thus it is that the castle form of building is the most suitable for such regions; the suitability being partly, no doubt, the association which connects buildings of the fortress aspect with crags and inaccessible places, but partly, also, that scenes of the kind we are referring to irresistibly suggest the power of natural forces, and we are scarcely satisfied unless with structures which seem capable of resisting the action of those forces. The principle will hold good, indeed, wherever nature assumes a wild, cheerless, and uncultured aspect, as on a bleak, barren moor, as well as in rocky and mountainous landscapes. By such a treatment we are, it is true, blending architecture with nature to a certain extent, and this because nature is here too strong for us. We can neither compete with her in character, nor offer an equally balanced contrast, and we are obliged to let our architecture fuse itself, as far as possible, with the landscape, which must otherwise overpower it completely. This fusing of architecture with nature is carried a step further, and as far as it can go, by the painter who reduces his architecture to ruin, from which the immediate human interest has departed, and which becomes, in point of picturesque effect and treatment, entirely one with the landscape, to which it serves only to impart the additional interest of association with past times and with the former history of man. This kind of sentiment in architectural ruins in combination with the landscape has never been more beautifully illustrated than by Richard Wilson, who, perhaps, was only searching for the mere pictorial element, in the introduction of his picturesque blocks of ruined buildings and fragments of arcades; but he was giving us more than, possibly, he knew of himself; and the architectural remains in his Italian scenes have a kind of combination of old and modern interest which reminds us of Goethe's beautiful little poem, where the wearied foot-traveller in Italy is guided to the peasant's dwelling to rest, and finds, instead of the lowly hut he expects, shapely time-worn columns and architraves, the remains of a ruined temple.

Among more recent painters who have happily treated buildings in combination with scenery may be mentioned Stanfield, who evidently attached great importance to buildings in his inland and lake scenes, and has a way of using them, very similarly in many of his works, which indicates a settled and premeditated treatment of them as features in a scene. He depends largely upon sunlit buildings for the principal lights in his middle distance, and an Italian tower or campanile so placed, and partly reflected in water, is a very common incident with him. Another painter, not so much talked about now as he deserved to be, Bridell, was occasionally very happy in his introduction of buildings, generally of a classic type, into landscapes exactly suited to this type of architecture. Of Roberts and Prout we do not here speak, because they were rather painters of buildings than landscape painters, and what little landscape did appear in their pictures was quite subordinate to the architecture. But among painters who have treated buildings in landscape with great success must be mentioned Duntze, the painter of winter scenes in Belgium. His pictures are very much alike certainly, and he paints but one effect; but his groups of high-roofed quaint houses are endlessly varied, and always picturesque and interesting; and their quaint jagged outlines supply to the painters leafless and flat winter scenes, just the relief and play of line which they want, and which in pictures of another

class would be furnished by the foliage of the trees and the undulations of the land. Of the value of architectural objects to the painter in giving interest to distance and middle distance, and aiding the linear and nërial perspective of a picture, examples are endless, and too obvious to need special reference.

It might be wished, however, that the architects would oftener show the same sense of the value and effect of their structures on real landscape which the painters evince in regard to their artificial landscapes. Often, in the designing of a building in the country, we are inclined to suspect that its effect on the landscape in which it is situated, and the most picturesque and effective way of placing it in regard to the landscape, is the last thing thought of, if it is thought of at all. Yet this is certainly one of the most important points in connexion with architecture considered from an artistic point of view, if we reflect that this combination of the building with the landscape is the only light in which it will be viewed at all—the only way in which any pleasure will be derived from it—by a large proportion of the persons who may see it. The strictly architectural beauties of the mansion, and the comfort of its arrangements, are confined to the experience of the owner and his particular circle of friends. But the position of a building in regard to the scenery in which it is situated, its being placed higher or lower on a slope, or a dozen other circumstances of site, may make all the difference as to whether, to the majority of those who see i t, it is a new beauty in the landscape, or an intruder spoiling the best point of the scene. We have in our recollection houses so felicitously placed, whether by choice or happy chance, in the landscape, as to be, under almost all aspects of morning and evening, a constant source of pleasure. It is surely worth while for an architect to make an endeavour towards attaining such an object as this, where it is possible. When an opportunity is afforded of placing a house on the end or spur of a moderate ridge, without its being too much exposed, this is one of the surest opportunities for realising picturesque effect. In such a position, too, a building, especially with anything in the shape of a tower rising from it, serves to give scale to the landscape, and may even be made to add to this without suffering itself from an architectural point of view. Conversely, a building ill considered in proportion and outline may succeed in dwarfing and impairing the scale of the landscape—a result which engineers are frequently exceedingly happy in realising by means of their own peculiar class of structures. While a building thus placed on an eminence requires a characteristic treatment of skyline by means of moderately elevated towers or cupolas (of which one of the finest and most picturesque examples is perhaps the palace at Cintra, which evoked so much admiration from Byron), a building on the slope of a hill will generally require a different treatment, in predominating horizontal lines; the building in this case appearing to nestle into the landscape rather than to stand out from it. The exact position for a building on such a slope, when seen in profile, will often be a very nice point to determine; a very little difference of place, higher or lower, making all the difference in point of effect. In such a position, as we hinted just now, tall projections in the shape of towers will mostly be out of place, as clashing too nearly with the slope of the ground behind them, especially when this is at all steep; and for buildings on eminences a degree of solidity and squatness of proportion is generally required even in their most elevated features, to give the requisite expression of stability and power to withstand all the attacks of the elements incident to such a situation. It is only in the plain, on level country, that we can successfully introduce features of great height; it is here that such features are practically most securely placed, and here, also, that they have their greatest effect, where there is nothing else to compete with them. This has long been recognised by architects, as is evident from the fact that the great spire districts of England are almost entirely flat countries,—a fact which completely bears out the position laid down above, that architecture, as a rule, must contrast with, and not compete with the character of the landscape. Few things of the kind can be finer and more successful in effect than some of our tallest Mediæval spires, rising straight from the flat expanse of country, or seen in the distance, a white spike lighted by sunshine, against the dark purple of the distant landscape,—the latter, as we all know, a favourite incident with landscape-painters. Much of the suitability of form in regard to site will depend also on the known climate of the country or neighbourhood; for an outline or composition which would be pleasing in a region of sunshine and calm may give a feeling of insecurity and instability if placed in a stormy and inclement neighbourhood. One recent rather successful adaptation of architectural treatment to natural site, which may be mentioned in illustration, is a large house (the residence of the head of a well-known publishing firm), which now forms the most prominent object in a walk out of Edinburgh to Arthur's seat. Situated low, this house would in a serene climate be judged as far too *prononcé* in character for the site; but taking into account the prevalent climate and weather of the neighbourhood, coupled with local associations of style, and the proximity of the overhanging brow of Salisbury Crag, the stern castellated character of this building, with the large, heavy square block which rises above the rest as the main feature, is a very satisfactory instance of the combination of architecture with landscape. The name of the architect has escaped us.

The consideration of colour in architecture, in regard to its effect upon the landscape, is a very important one; that is to say, it is a great and crying evil when colours and tones, crude and out of keeping with the tone of the landscape, are introduced into it; though the means of avoiding any glaring inconsistency of this kind are very simple. Build, as far as possible, with the materials of the district, if you would have your building harmonise with the tone of the landscape, since it is these materials that give, or rather, in fact, constitute, that tone. This is the secret of part of the charm of many a simple old country church—many a rural cottage; they are of the same material which forms the basis of the landscape around them, and fall naturally into keeping with it. It is odious to the eye, often, to find in the midst of a quiet rural landscape a staring, particoloured portent of patent brick or "streaky-bacon" masonry, frightening away all repose and harmony from the picture. Foreign materials may be used with happy effect in small quantities, to relieve and brighten up the structure; but let the main part of its material be, if possible, of a local growth, and imbued with local colour.

Where a house is necessarily at all out of keeping with the landscape, in this or in other respects from the necessity of using materials foreign to the site, the inconsistency may be got over by connecting the house gradually with the landscape, through the medium of terraces and gardens, in which the materials and treatment should be made gradually to coincide more and more with the character of the landscape, till the point is reached where the artificial blends with the natural. Very beautiful results may be produced in this way, with care (and cost).

There will be many other points to be found, in almost every case of buildings to be erected in the country, in regard to which it will be possible to render a structure a desirable feature in the landscape; but nearly every case will present its own problem, to be dealt with according to perception of the architect. We will only add that, in selecting the precise site for a house, in addition to the usual questions of foundation, drainage, &c., to be determined by a close inspection of the ground, it may sometimes not be labour thrown away to take a more distant view of the site from one or two neighbouring points, and endeavour to realise how far the building may be best placed, so as to be a real added interest to the landscape in which it is to form a permanent feature.

MEN AND MASTERS IN SOUTH WALES.

IT is worse than idle to ignore or to dissemble the extreme gravity of the crisis in South Wales. It is far more than the prosperity of even that busy centre of production that is at stake. Our great staple industries of iron, of coal, and of all the thousand crafts that depend on the regular production of these prime elements of skilled labour, are all, directly or indirectly, involved. The mining industry of the country alone is a source of national income to the amount of 200,000*l.* a day, for each of the six working days in every week in the year. Our latest returns, those of 1871, have been issued within the past few days. From 210 mines, during that year, were raised 17 million tons of iron ore, of the value of 7,700,000*l.* From 2,760 collieries, 117 millions of tons of coal were raised, of the value of upwards of 35 millions sterling. The total value of the minerals won in the United Kingdom in 1871 was 47¼ millions sterling, being 2 millions more than in the preceding year. Such is the direct industry, and such was the rapidity at which it was expanding, the rate of increase being such as, if steadily maintained, to double the production in five years. The opposite side of the picture is too gloomy to be regarded without feelings of apprehension, as well as of distrust.

Our collieries found employment, in the year 1869, for 345,446 male persons, of whom 282,473 were miners; the yield of that year being 108 million tons of coal. It is not easy to compare the complex industry of iron with the simple statistics of coal. We have stated the estimated value of the iron ore won in 1871. In that year the pig iron produced was valued at 16,667,947*l.*, being an increase of above 1,700,000*l.* in value over the preceding year. When we compare the price of pig iron with that of bar, of rails, and of sheet, and when we further consider the great development recently given to the manufacture of steel, we shall be able to form some idea of the labour devoted to the manufacture of iron, in the condition in which it becomes an article of commerce; and perchance the raw material for the ironsmith and ironworker for all descriptions of trades.

Bar iron was quoted on the 6th of January last at from 11*l.* 10*s.* to 12*l.* per ton; Staffordshire sheet iron being as high as 15*l.* 10*s.* Scotch pig was at 6*l.* 6*s.* These prices have been attained by a gradual rise from 6*l.* 5*s.* per ton for bar iron in 1861–1862. In 1856, the price was 9*l.* 1*s.*; in 1851, 5*l.* 11*s.*; in 1845, 9*l.* 5*s.* Thus for the last quarter of a century there has been a recurrent rise and fall in the price of iron, the maximum quotations being very nearly three times the minimum. It is evident that a trade subject to such enormous fluctuations must demand both unusual powers of business, and very large capital, for its maintenance. And the question is further complicated by the fact, that other parts of the world are only too well prepared to come into competition with the United Kingdom, for the production and manufacture of iron, not only as to quantity and price, but, still more seriously, as to quality.

Thus the grim, hard, fact, of the sudden cessation of the bread-winning work of some 60,000 industrious men in South Wales,—a fact, enough, in itself, to intensify the rigour of a winter that has lost its usual character,—is but an item in that long catalogue of mischief which opens with the word "strike."

It has been urged as a matter of hope, in the contest now joined, that mutual consideration and good temper have, to an unprecedented extent, been maintained during the preliminary discussions. We confess that we derive but small comfort on the present occasion from this fact. When persons quarrel in haste, they may often make friends on mutual reflection. But when the real points of difference appear, to the uninformed looker on, to be so slight that they may readily be compromised; when mutual accommodation is proposed, and when, coolly and composedly, it is refused by both parties; experience shows that the break is very difficult to close.

It is important that this great question should be viewed in its true light. The self-control hitherto exercised by both parties has, at all events, the advantage of rendering this more easy. The men who are put in the fore-front of the battle are not those who have provoked the contest. The former will be, there is no doubt, the first to suffer. They are the forlorn hope of the union; and a forlorn hope exposed to suffering and starvation, for a cause to which they by no means wholly belong. For the extreme cruelty of this case lies in the fact, that so few of the ironworkers are union men, so that they will not enjoy the usual solace of strike money; but that, while holding out for a union purpose, they do so at their own cost. It must not be forgotten that this is not the case of an ordinary dispute between masters and men. The relations between the great Welsh ironmasters and the thousands whom their wealth and enterprise enable to support themselves, have been of somewhat a patriarchal character. It is impossible either to know the district, or to read with care the accounts of the conferences that have taken place, without being aware of this fact. Had Wales been left to itself, those who know best believe matters could scarcely have come to their present condition.

We are not about to raise any question of a

sentimental nature on this ground. The appearance of the officers and delegates of the union in Wales; the reference of decisions affecting the wives and children of the kindly Welshmen to Darlington,—all these matters are incidents of a state of war. Battle once joined between the two parties, humanity has but little to do with the matter.

The ground, then, is thus cleared. The masters are to submit, or the industry of South Wales is to be destroyed. It is on labour that, after all, the blow is to fall. With the knowledge we possess of what Russia can do in producing iron, we are convinced that it is not, at all events, a very selfish spirit that keeps so many millions invested in the Welsh iron-fields. While all goes on well; while forges glow, and fans hum, and wheels revolve; above all, while there subsists the strong tie of mutual reliance and good feeling between the head and the hands, it will not be the prospect of larger returns for his capital that will tempt the great ironmaster to displace the seat of his labours. But if, in spite of all that he can do, and in spite of the better feelings of his men themselves, a schism like that is to be forced on by a semi-political agency, we very much doubt whether any long-headed men will long continue to devote their resources to the production of a metal which is both dearer and inferior to that which only awaits the application of a little enterprise in the north of Europe.

Arbitration may mean one of two things. It may mean the reference of a dispute to the decision of a tribunal, or of a judge, appointed *ad hoc*, with the assent of the disputants. In that case it is a special tribunal, with definite, legal powers. The erection of such tribunal is not forbidden,—we cannot say is discouraged,—by our laws and our judges. In cases where a great amount of detailed investigation is requisite, and where public convenience does not allow of the necessary time being devoted to the question, by our courts of law, arbitration is at times resorted to at judicial instance. In foreign countries where the code prevails, arbitration is rendered legally imperative, in many cases, such, for example, as partnership accounts. The arbitration is clothed, for the time, with judicial functions, and the award is enforced by all the authority of the law.

An arbitration of this kind is, in fact, a legal measure, and as such it may be a most beneficial procedure. But it is of its essence that it shall be conclusive. The parties arbitrated between must be under the power of the Court. No backing out must be possible. It is a lawsuit, civil, not criminal, amicably decided, but decided with all the authority that dignifies even a judge pronouncing on a criminal question.

Any other arbitration than this is simply an offer of good offices. Its possible advantage arises from the chance that a third party may suggest some possible compromise. Between angry disputants, blinded by their own passion, such an intervention may be of great service. Personal dignity is saved; matters that may have been overlooked are brought to light; in fact, a hasty quarrel may be soundly made up.

In the present case we fear there is but little room for an arbitration of good offices. With suggestions of all kinds, of more or less value, the press has teemed. Men who have seen the national danger of the contest, and have seen little more, have been eager with their advice. But the position has been misunderstood. For the ironworkers the fact that the price of iron has fallen might be reason enough why their own wages should fall. But for the men who have hitherto forced on the strike, this is only a trifling incident. They wish to seize the opportunity of deciding on the proportion to be henceforth maintained between profit and wage. They want not only to know what the ironmaster can afford to pay, but further to decide at what rate of profit his own capital and energy shall be remunerated.

This is a point which we are disposed to think it is impossible to carry. With one or two great employers, indeed, it might be easy to cut away any ground from the agitation. "There are our books," a merchant prince might say; "there are our private ledgers. So and so is the capital I have invested. Over the twenty-five years past, while iron has varied from the price of an ounce of gold for a ton of pig to that of more than three times that rate, I have kept my works open, come fair, come foul. So many thousands are housed, fed, and made comfortable by my great business. I can live without it. My profits, one year with another, are so much per cent. And I cannot, and will not, encounter so vast an anxiety and so imminent a risk for less. I will give such wages, and no more. Please yourselves."

Ironmasters whom we might name might, and possibly very readily would, take this tone. But justice is impartial. It is not one or two *millionaires* who alone can consider what they choose to do. We have seen that the forges of the country are very numerous. Small masters have to be protected as well as great ones. The rate of profit that will pay liberally with a large make may be such as to starve the small maker. No steps, therefore, in the direction of making the rate of wages a direct and exact function of the market price of iron can be justly taken without the concurrent establishment of a vend, or syndicate, among the ironmasters. Now our trade has grown up on the competitive principle. If an order for 50,000 tons of rails, for instance, has come from Russia, it has been matter of the keenest competition. Each great "works" preserves with the utmost care the secret of its cost price; for the sound reason that on the one hand its profit, and on the other hand its power to compete for orders, depend on this reserve. If the whole iron trade were formed into one great body, in which the interests of larger and smaller proprietors, and the respective advantages of different works, were elaborately and accurately balanced; if, instead of firm competing with firm, each took its fair turn and proper proportion in the supply of the market of the world, a partnership between master and men would be not only practicable, but, in our opinion, most beneficial to all parties. But while competition exists in the iron market, a demand for such an arbitration as alone could have any reality seems to us useless.

We speak as to friends and constant readers on both sides. We venture to think the majority will see, on reflection, that our view is correct. We have ever been advocates of the principle of co-operation. We believe that it forms the great hope of the industry of the future. To introduce it into every occupation in which great bodies of men are concerned is, we hold, desirable. Nor do we doubt that all difficulties as to the application of the system are to be removed by a sincere desire to dispel them. Where there is a will there is a way.

But, then, this application of the co-operative principle must be, in every case, in accordance with the special requisites of each distinct business and occupation. In a joint-stock bank, for instance, none but very foolish proprietors ask at public meetings for a list of securities. Confidence is the soul of many kinds of business. If no confidence exists between the partners, none will be awarded to them by the public. Now, something of the co-operative principle is implied in the rise and fall of wages with the rise and fall of prices. That this may be further developed we think highly probable. But it can only be so developed by mutual confidence between employer and employed. Supposing an ironmaster to promise to increase his workmen's wages five per cent., if they enabled him to do so by their extra industry. It would be well worth the while of all parties to do so. But if the offer involved the cession to any workman of the right to inspect all the books of a large firm, or to set any small lawyer to perform this task for him, no concession of the kind would be for a a moment practicable. It is thus of the very nature of business that the ironmasters should be treated with a certain degree of confidence by their workmen. If they say that with a rise or fall in the price of iron they agree to a certain proportionate rise and fall in the price of wages, they go as far as, under the existing circumstances of trade competition, they can be called upon to do. If they would go a step further, as, for instance, to say that, with the maintenance of a certain definite proportion between the consumption of ore and of fuel and the production of iron, they would give a bonus at the end of the year, or a *pro-rata* increase of wages, they would, we conceive, both become richer and pay more to their workpeople. But if the latter distrust their truth and honour,—if they insist on determining, not only for what wages they will themselves work, but at what exact rate of profit every forge in the kingdom shall be kept in blast, year by year (for it comes to that),—if that is insisted on,—we see no result possible but the forced emigration of capital, and the transference of the great seat of the iron-manufacture to Russia.

We call on those who are responsible for the maintenance of the present strike to ponder on what we have said. We are no advocates. We have not exchanged a single word with any ironmaster since the quarrel began. Neither are we of that school in political economy which attributes a magical power to capital. We hold the best capital to be the shrewd, honest, persevering, instructed head, and the strong arm. We know that the former is of more importance,—as more rarely to be found,—than the latter. But we do know something, not only of the enormously productive power of well-directed labour, but also of the course and customs of business. We may wish things to be other than they are, but we can only regard them as they actually are. We might say, here is a great question to be fought out. We have our own opinion of the result. We are far from the actual scene of strife; we can only look on, and learn.

But when we know it is not only the daily bread of thousands, the misery of helpless women, the suffering and death of children, during the miserable prolongation of the struggle, that are involved; when we see that a great industry, checked by this struggle between the belly and the members, only requires a little more discouragement to take its flight from our shores; when we see that, we cannot be silent. Let our readers recall what we told them just a year ago, about coal. When but a hint had been given by the market quotations, we showed them, from a serious investigation of the condition of the collieries, that a rise was inevitable, and probably at hand. All remember what occurred. On precisely the same dispassionate consideration, and with judgment wholly unbiassed, we assert the certainty of a long and deadly struggle, if the demand for arbitration on the whole question be persevered in. The masters may do much to remove erroneous impressions as to their profits, and should unquestionably do it. The masters, moreover, should meet concession with concession. Let peace be made before it is too late. It will be many a year before the Russian forges are blown out by a demand for arbitration.

VIENNA AND ITS EXHIBITION BUILDING.

THE extraordinary building erected in the Prater at Vienna for the approaching international Exhibition, proceeds apace towards completion. We have already given our readers particulars of the undertaking, with a view of the central portion of the structure, and a plan of the whole.* As regards the construction of the building, the commission adopted a plan designed as early as 1845 by the architects of the Vienna Opera, Siccardsburg and Von der Müll. This plan, entirely differing from all those of former Exhibitions, was followed. It offers not only a better light for the objects exhibited, and allows of extension of the covered area according to the wants of exhibitors, but makes the employment of many hundreds of workmen at the same time in the different galleries without hindering one another possible, and permits of the goods of the various States being deposited in their respective spaces without interfering with their neighbours, which circumstance must effect considerable saving of time, an important point in this case, as time is so short. Seven thousand workmen went to work at once, an army which to keep in order requires no ordinary amount of tact and energy. Wages, of course, rose in Vienna to an enormous extent. A simple labourer earned 3 florins (6s.) a day; bricklayers made from 52 to 56 florins (over 5*l.*) per week; and large numbers of workmen were brought from all parts of the empire—Tyrolese, Albanians, Czechs, &c.

To the architect Hasenauer was confided the execution of the plans marked out twenty years ago, the original designers having departed this life. The originality of this plan consists in the application of the so-called "herring-bone" system, which resembles somewhat the architecture of the Escurial. From a gigantic longitudinal gallery, 905 mètres long, and 25 mètres broad, branch out at right angles, and at regular intervals, sixteen cross-galleries, 205 mètres long and 15 mètres broad. In this wise twenty-four courts, closed on three sides, and having the same length as the cross galleries, and a breadth of 35 mètres—for this is the distance between the cross galleries,—are formed on both sides of the great gallery. On this plan, the architect, Hasenauer, founded his division of the principal building, dividing it into

* Vol. xxx., pp. 744-7.

a large quadratic central construction, and a smaller building at each end, which latter inclose each an octagonal court. The centre, again, of the central building will form a grand rotunda, constructed entirely of iron, whose erection by the firm of Harkort may be considered a triumph of modern engineering. This rotunda is the idea, as we have before said, of Mr. Scott Russell, who takes a great interest in this part of the Exhibition works. The span of this dome, roofed by a new method, amounts to more than double that of the greatest domes of the world, viz., 108 mètres. The width of the dome of St. Paul's is only 35 mètres; that of St. Peter's is only 49 mètres wide; that of the London Exhibition building of 1862 was only 50 mètres. These figures alone give us an idea of the imposing dimensions of the gigantic cupola, which has been erected without any outside scaffolding, and the shell of which was hoisted and fixed by Harkort's engineer, M. Steiger.

The director-general of the Exhibition, Ritter von Schwarz, has another purpose in view with this rotunda. He intends it for a memento of the days of the Exhibition which, being both a thing of beauty and of usefulness, deserves to outlive those days. And it is here that the whole plan of the Exhibition borders on another grand undertaking, which may be mentioned—the great work of the regulation of the Danube.

The Viennese have now for some time been almost ignorant of the fact that their city really lies on the Danube. The Danube Canal, which separates the inner city from the Leopoldstadt, was, so to say, only a poor substitute for the mighty stream, which in a bed gradually being choked up with sand, rolls its waters nearly a mile (German) from Vienna towards the east, and the poetical "beautiful blue Danube," was to the real Viennese nothing but a popular myth, which to behold was the fortune of but few. The Government, together with the authorities of the province of Lower Austria, and the administration of Vienna, resolved to divert the Danube from its present course into a new bed, now nearly completed, to bring it half a mile nearer to Vienna, and to open up to the capital, by this close connexion with a great navigable river, all the advantages which can be derived for commerce from so favourable a position. It is intended to construct great docks, erect factories, warehouses, and counting-houses along the banks of this new Danube, and so lay the foundation of an emporium which shall attract all the traffic of the river. The new Danube-Stadt is to spring up close to the Prater, consequently near to the Exhibition building, and the great rotunda is looked upon already as the future corn market and warehouse of the new city.

Yet more. Behind the longitudinal axis of the Exhibition building, close to the newly-constructed Danube dyke, rises the treble gallery for the machinery, of about the same dimensions as the Exhibition building proper, in the construction of which its ulterior destination as warehouses for the new city has not been lost sight of. During the Exhibition, the machinery will be in full activity, and the great space allotted to it will be of immense advantage to the exhibitors of machinery from all countries.

Opposite the southern cross front of the principal building is an annexe in four rows, the Hall of Arts. In the middle will be a double row of rooms, with ample skylight, for the reception of more important works of art, while at both sides, in smaller galleries, will be exhibited the smaller art-treasures. New modes of lighting, which have already been tried on a small scale, will be here employed. Tastefully laid-out gardens will fill the space between the Hall of Arts and the Palace of Industry, which will serve at the same time as places for exhibiting objects of the plastic art. A covered gallery leads from the Hall of Arts to the left, at both ends of which are *pavillons*, to contain a new feature, "Expositions des Amateurs." It is the intention to induce private collectors to exhibit their treasures here. Near the Hall of Arts large palm-houses and gigantic aquaria will find their place.

Admittance into this world of wonders will be gained, besides by the thirty-two entrances at the frontal sides of the cross galleries of the Exhibition building, by four principal portals, to be decorated in the most splendid style which art can devise. One of these portals leads from the principal road of the Prater to the Exhibition. On passing this wide gate, a park, profusely decorated with *bosquets* and *bassins*, lies between the beholder and the building, while on both sides of the way stand *pavillons* of different shapes opposite to one another. Close to the entrance to the left is the building for the commission; to the right the post-office; farther on to the left the *pavillon* of the jury; to the right that of the Imperial family. Close to these buildings, farther to the right, follow others, erected by the Sultan, the Khedive, the Prince of Roumania, &c., at their own expense, with Oriental splendour, which will leave those of the last Paris Exhibition far behind. Even Japan, besides China and Siam, has lately asked for space of 4,000 square mètres for her special exhibition.

A series of buildings has thus been undertaken, for the construction of which over 28 millions of bricks were necessary. To facilitate and accelerate this mighty work, eleven lines of rails were laid down from the two principal termini of Vienna to the area of the Exhibition, else it would not have been possible to do so much in so short a time.

THE COMBINATION OF COLOURS.

AT a recent meeting of the St. Helen's Literary Society, Mr. S. Chandley read a paper on "Art in Form and Colour." After treating of form, Mr. Chandley said,—Sir Isaac Newton established the theory that there were seven simple or homogeneous colours. This was afterwards reduced by Sir David Brewster to three, and he showed that the analysis of white solar light consisted entirely of the three primary colours—red, blue, and yellow,—and that the other four were simply compounds of these three. We may now refer to the similarity between music and colour. The note C may represent a single colour, simple and pleasing in itself, say red; by sounding G, its fifth, simultaneously we get improved harmony, so by placing yellow with the red; sound E, and we get the ear thoroughly satisfied, and it is not until we place blue in the harmonic triad of colour that the eye is perfectly satisfied. Each of these colours is capable of a key-note for an arrangement to which all other colours must refer subordinately. In our several examples of colours, we have difficulty by artificial light in illustrating the exact colours, as the gaslight being yellow it imparts a yellowness to some colours and takes it out of others.

Now the strongest and most beautiful contrast to any one given colour is produced by the admixture of the other two; for instance, the harmonious contrast to red is produced by mixing yellow and blue, producing green. The harmonious contrast to blue is produced by mixing red and yellow, which give orange; the strongest harmonious contrast to yellow is purple, produced by mixing blue and red; these combinations are what are called secondaries (as distinguished from primaries), now there is no guess-work: it is as infallible as a rule of three sum. Here is a natural proof: place a red wafer on a sheet of white paper, gaze at it for some time, and there will appear its complementary colour, green, to surround it. The same complementary colour, purple, will surround a yellow wafer, and orange a blue one, and *vice versâ*.

Colours have a shade, and a hue. By shade we understand the depth of a colour as in the gradations from black to white. By hue is meant any compound colour undiluted. For instance, we say an orange colour of a red hue or a yellow hue; or purple from the bluest to the reddest hue. Nothing is more common than in the assorting of wools to mistake these two qualities, and often we see a pale lemon colour shaded down to a deep orange, or a yellow-green down to a dark blue green, which, when worked into a subject, makes the general effect so entirely discordant. We will now consider other attributes of the three primaries, red, blue, and yellow. Red, then, is the most positive of all colours. It holds the middle station between yellow, which is most allied to light, and blue, which is most allied to shade, is decidedly a warm colour, and imparts that quality into every compound colour into which it enters. The effect is most apparent when compounded with yellow.

Red, from its powerful nature, requires more careful management than most colours, but is highly useful and agreeable when reduced into tones of chocolate and claret, and perhaps (next to green and blue) is the most agreeable colour to look upon. Not so when it becomes what is usually called "mauve" (which is crimson diluted with white), and in some of its shades is a most irritating colour, and highly destructive to all other surroundings, as its contrasting colour is yellow, so it yellows or fades all colours near which it is placed, and it is rarely acceptable as a colour in dress, without being considerably mellowed by being placed in juxtaposition with plenty of white or black. Blue is the next primary, and is the nearest to shade as yellow is to light. It is the only absolute cool colour, and communicates this quality to all hues into which it comes in combination. It is a pleasing colour, and may be used in almost any arrangement, and has a larger portion in nature than any of the two other primaries. There is a popular notion that blue and green are discordant when viewed simultaneously. If we look on a blue sky shining over a green meadow, we shall see under what circumstances they agree (as nature never errs). It is that green is yellowed by the sunlight, which, along with the browns of nature, is sufficiently warm to be thoroughly harmonious. Yellow, the next primary, is the lightest of all colours, white excepted, which we consider the combination of all colours reflected. Black—absorbed, its proportional power to red, or blue, is as three to thirteen. It is the most positive and least agreeable colour to the eye, that is pure and undiluted. Now, if nature never errs, why, it may be asked, does she give us the largest flower we have, yellow, the yellow sunflower? Now, on analysing this, we shall see that the great bulk of the centre of this flower is not yellow, but its contrasting or neutralising colour, melodised to it; so the otherwise vulgar staring flower becomes perfect. The eye dwells with greater pleasure on yellow, the more it is diluted or weakened in intensity, and we can tolerate a lemon tint or light buff; but even then, unless toned down, you often hear it denounced as sickly and bilious. And we may here remark that no combination of colour can be complete without the three primaries entering into their component parts, either in their pure form, or compounded with secondaries; all should be so arranged as to form a general bloom, the most powerful colours necessarily being in the smallest proportion.

We have dwelt on the pleasure experienced by the contemplation of beauty, of arrangement of colours, but we must not conclude this is a natural pleasure. It is a natural pleasure to see colour, but not in its most refined combinations. A child manifests its natural taste by preferring those toys most gaudily painted, and with the greatest amount of vermilion. A collier dresses himself in a green plush waistcoat with a couple of dozen of brass buttons down the front and a scarlet comfortable, and thinks himself perfection. We occasionally see also natural taste showing itself in the shape of a pink bonnet, orange shawl, and a green dress. But we do not set these up as examples at all to be imitated, as in nature (which we may always take as our type) we never see large masses of bright colour without a larger quantity of neutral or tertiary colours to tone, subdue, or counterbalance them.

It has been suggested that I might further illustrate this subject by reference to house decoration and furnishing which would introduce us to textile fabrics also. Now if you are going to furnish and decorate, say your dining-room, it may be done either by the harmony of analogy or by the harmony of contrast. Your first consideration in either case should be the aspect. If south or west it requires to be on a cool key. If north or east, it should be on a warm key. You then may consider your pictures (if sufficient to require consideration). Now sage green is perhaps for a background the most suitable (or claret, if there is plenty of light and a cold aspect); say the former. Green for the walls, you would then ask what is the complementary colour of green. The answer is red; so you get the three colours by fixing red for your curtains, and blue and yellow in combination, forming green, on the walls; you have only to regulate it further by ascertaining whether the green is a blue green or yellow green. If a blue green, the complementary will be made up by adopting an orange red,—in other words, scarlet or cherry; if a yellow green, purple must enter into the composition of your red, which then becomes more crimsony. If the chairs are covered with morocco, the same rule holds good. If you did not feel that you had your red blue enough, a border containing blue might be added. If short of scarlet or yellow, a gold-colour border would supply that deficiency. The law of contrast in colour is equally invariable in dress, and, as far as this is concerned, we only need look at some of the costumes worn by some of the higher

classes in England at the present time, to be struck with the advanced taste and refinement that pervade it. Plenty of sombre colour, but little raw or pure.

PEGWELL BAY RECLAMATION.

THE streak of silver sea that furnishes a sense of security to some subjects of the United Kingdom is well known to be mutable, although beautiful. In some places the tides, in successive series of years, are encroaching upon the land; in other localities,—in some instances by natural action, and in others by man's device,—the domain of ocean is invaded, and dry land occupies large areas covered in former times by the waters of the sea. Great changes have taken place in the shore-line of almost the whole of Wales, and of the coast northwards, from the estuaries of the Dee and the Mersey. In some places traces of cultivation exist, according to Dr. Hume, down to the very margin of the tide. It is demonstrable that the Wirall shore-line formerly projected much further to seaward, as is shown by ancient maps, and the testimony of historic records. In that district the encroachments of the sea have carried away part of a racecourse, and of a public road, with the whole of a burial-place. In Cardigan Bay evidences of the existence of an extensive submarine forest have been distinctly traced, with trunks of trees and standing stumps as hard and black as ebony, the marks of the axe as sharp and distinct as if they had been just felled. Bardsey Island, in Cardigan Bay, and on the Carnarvon coast, is now, or was not many years since, rated as part of Pembrokeshire, and paid taxes as such.

The encroachments of the sea are, however, compensated by recessions. On the west coast of Anglesea the sea is receding, and extensive tracks of blown sands are being deposited towards the south-west end of Menai Straits. In another locality Tremadoc nestles in a valley formerly covered by the sea. On the southern coast of Wales extensive alluvial deposits have been lodged in many places that are protected by blown sands, and the same phenomena are presented on the south coast of England; as witness the present condition of some of the Cinque Ports, which may now almost be called inland towns.

"Sandwich the Silent," one of the renowned five ports, has long since receded from the shore-line, or rather the shore-line has receded from it, and the distance between them is, it would seem, to be further increased by the reclamation of part of the beautiful and placid Pegwell Bay, for which there is a Bill before Parliament for this year. The records of Sandwich date from the sixth century. In the days of the Roman power, Pegwell Bay had, doubtless, deeper water, and Sandwich stood much nearer the shore than it does now, or it would not have been chosen as one of the five ports. It is situated on the river Stour, which has, in the course of centuries, carried down and deposited, at the estuary, a vast quantity of almost purely alluvial matter, which has been allowed to rest undisturbed on the shores of the sheltered bay into which the river debouches.

The Bill to be brought before Parliament is for the cultivation and improvement of waste lands in Pegwell Bay and Sandwich flats. Waste lands include the surfaces over which the tide flows at ordinary spring tides. The proposed capital of the company is 200,000*l.*, with the power to borrow 66,000*l.* The works include an embankment of about four miles in length, to be at a height of about 20 ft. above high-water mark, and as much more above the sands at low water. The present mouth of the Stour to the sea is also to be stopped, and a short cut or canal substituted. Several carriage-roads will also be constructed under the powers of the Act, if granted. The company asks for powers to bring into a state fit for cultivation such lands as they may from time to time reclaim from the sea. The works proposed are to be executed within five years from the passing of the Act. The tolls proposed to be charged for the use of the company's roads seem ridiculously high,—as, for instance, for every vehicle drawn by a horse or mule, 6d.; by two horses or mules, 1s.; ditto carrying more than eight passengers, 1s. 3d.; for every donkey-cart, 4d.; for every horse or mule, 6d.; for every donkey, 2d.; for every foot-passenger, 2d., &c.

The expense of the works is estimated by Mr. F. H. Falkiner, the engineer, at 170,000*l.* There are more than seventy official authorities, and private owners or occupiers concerned, the former including the Lords of the Admiralty, who will of course take their stand on foreshores, being Crown property, regardless of the rights, or say the reasonable expectations, of those who have incurred the cost of reclaiming the waste. Witness the case of the Thames Embankment.

Whether the present promoters succeed or not, there can be little doubt that the greater part of the shallow part of Pegwell Bay will be eventually converted into dry land, and that the successful works of the Messrs. Brogden, in Morecambe Bay, by which they have added hundreds of acres of fertile land to the resources of the country, will be imitated in the estuaries of the Stour, the Dee, and other tidal rivers.

PROPOSED TOWER BRIDGE.

THERE has been frequent complaint that the Thames has not as many roadways between London on its north and south banks as the vastness of the population to be accommodated, and the importance of the commercial and social interests concerned, demand. Many projects for new bridges, railway and other, have been proposed in successive years, but no additions to their number, except Southwark Bridge, for ordinary traffic and the railway-bridges, have been made since Waterloo Bridge was finished, more than half a century since. London, Blackfriars, and Westminster Bridges are mere renewals of previously-existing communications in the same situations.

One of the Bills to be brought before Parliament in the session of this year is for powers to construct an iron bridge over the Thames, with roadways and approaches thereto, for the passage of foot-passengers, carriages, carts, wagons, horses, cattle, &c., with all necessary works and conveniences, to commence in Fair-street, in the parish of St. John, Horselydown, Surrey, and to terminate in the parish of St. Botolph Without, Aldgate, and district of the Tower, on Little Tower-hill, Middlesex, to the westward of the main entrance to St. Katharine's Docks. It is also proposed in the Bill to take power to make "four tunnels or subways in the line of the proposed bridge, and in or under the bed of the river Thames," to be connected with the footways on the said bridge by means of shafts to be constructed in the piers of the bridge. These tunnels or subways are to be two on each side of the river, each pair parallel, and about 80 ft. apart, and constructed in directions running nearly due north and south. They will be respectively about 150 ft. in length, and distant at their inner ends about 200 ft. from the centre of the river.

Mr. R. M. Ordish, who has achieved a fair reputation in iron bridge-building and iron structures, is the engineer. He estimates the expense at 372,000*l.*; the bridge is to have two spans, and to be of the bow-string girder type. The company necessarily look for their return to powers to impose tolls. These, it is proposed, are to be, for foot-passengers one halfpenny each; horses, mules, or asses, laden or unladen, not drawing loads, one penny each; each horse or beast of draught drawing any carriage, cart, or wagon, twopence; for every carriage, twopence; for every cart or wagon, fourpence; for cattle, sheep, and pigs, fivepence per score. The tolls certainly seem objectionably high; as stated, a two-horse cart or wagon will be charged eightpence, viz., fourpence for the cart, and twopence each for the horses.

The sea-going steamers that stop short at London Bridge, and the sailing-vessels that anchor in the Pool, will have to pass under the proposed new bridge, which must necessarily give a water headway sufficient for unimpeded navigation. This will necessitate approaches that will interfere with a considerable amount of warehouse and other property. It seems questionable whether the fair claims of owners and occupiers can be met out of the residue of 372,000*l.*, after costs of construction have been deducted.

The Building Act.—A paper will be read on Monday afternoon next, at a meeting of the Health Department of the Social Science Association, by Mr. John Liddle, medical officer of health for the Whitechapel district, on "The Defects of the Sanitary Provisions of the Building Act, 18 & 19 Vict. c. 122, with Suggestions for their Amendment." Lieut.-Col. M. Beresford, M.P., will take the chair at four o'clock.

COUNTRY HOUSES.

ARCHITECTURAL ASSOCIATION.

A LECTURE was delivered by Professor Kerr at the last meeting, on "The Design of a Small Country House,"—understood as the residence of an English gentleman and family, living in the manner of their class, within a few miles of London or some large town; the site being three or four acres (more or less), and the cost from 2,000*l.* to 4,000*l.* The lecturer treated in detail all the rooms and other portions of such a house, giving definitions of their special uses, and indicating the most usual methods of plan and arrangement. On matters of much importance affecting such a house and its serviceableness, the following, among other conclusions, were stated:—

Approach.—Let this be from the north, or, if that cannot be got, then from the east. The view of the lawn and gardens must be well shut out by shrubbery (in which no flowers should be admitted on any consideration, the garden being the place for them). An entrance in a prominent position always gives value to a house. *Prospect.*—This should be open on the south, perhaps on the west, with shelter on the east. *Aspect.*—South-east is the most favourable aspect for all the living-rooms of a house, if it is to be had. They will be warmed by the morning sun, will be in the shade in the hot noon and afternoon, and not exposed to the strong winds and driving rains of the south-west. The gardens will be towards the south, and the lawn to south and west,—the sunset is considered of much value to a lawn. The offices should look northwards and eastwards (not westwards), these aspects being of least value. The servants' entrance may be on the north front or east return, with special access from the main road, or, at any rate, arrangements to avoid the necessity of tradesmen's carts stopping in the drive. The sacrifice of aspect to prospect will certainly be the cause of after regrets. In a drawing-room, the most admirable views will grow less interesting in time; but the welcome sunshine and warmth cannot be spared with safety. In a dining-room, sunshine from the west at the customary late dinners will be found a most serious drawback in the use of the room for its most important purpose.

Internal Arrangements.—The *lines of traffic* should always be kept in view. The parts of the house devoted to the family and visitors must, when in use, be crossed by the servants very rarely, if at all. For instance, the dining-room should be served from the kitchen through the servery, without the hall, staircase, or main passages being necessarily passed through. By the second staircase the servants should be able to reach all the upper parts of the house. The drawing-room doors especially should never be passed in carrying to the various rooms. *Main Staircase.*—This should be the way to the bedrooms, and to nothing else (a drawing-room or study upstairs will be an unusual arrangement,—not the normal one; and, however, suitable for some one family, will probably be awkward for those who use the house thereafter). It should be near the entrance, so that ladies may readily reach their rooms to take off clothes on coming home; for convenience on the upper floor, it must be fairly central there. A north window will often be best, as saving the valuable aspect for rooms, and as the north light is clearest, latest, and without sun. *Bedrooms.*—These may be all on one story, or on two. To all the main rooms there must be direct and stately access,—a house sinks at once down to a lower level if it has badly lighted and ventilated passages. The indispensable furniture of every room should be plotted on the plans—the bedstead, dressing-table, and a wardrobe. Two bedrooms, each having a dressing-room [with small bedstead] attached, will usually be sufficient; one being for the heads of the house, the other for married visitors. The rest may be single rooms. *Nurseries* are ordinary bedrooms temporarily devoted to a special purpose. They must, in an English house, be not inconveniently far from the mother's bedroom; at the same time, they may be shut out by a door and lobby from the rest of the story. The day nursery should look southwards.

The lecturer noticed the matter of change of occupants in a house of the class dealt with. Through death, or reverse of fortune, and other causes, property of this kind is constantly changing hands, or receiving fresh tenants. It is therefore desirable for architects to lean towards arrangements found generally suited to

the habits of the larger number of families of the same rank in life, and not to consider merely the immediate wants of a client. As many of the ordinary requirements are founded on what seems like sound reason, they are little likely to be affected by change of fashion. As to the question of regular or irregular plan, regularity seems to add to the general estimate of the serviceableness of a house. Symmetry and simplicity of plan are highly valued. Though wanting in piquancy, and apparently uninteresting, a house possessed of a good and readily apprehended arrangement of rooms, will never want admirers among the English gentry. As to the ventilation lately so much pressed on the notice of everybody, the classes for whom architects have to work will not submit to low temperatures, and possible draughts, and much extra clothing indoors in cold weather;—perhaps (the lecturer said), the indispensableness of much special ventilation is often exaggerated in speaking of the large and lofty rooms—not over-crowded—of the houses we are treating of. In fact, taking them altogether, the English houses are the best designed in the world, the most replete with comfort, and with the best provisions for the special habits of their occupants; it is probably because so high a standard of excellence has been reached that they are so much found fault with.

THE NEW BUILDINGS IN LUDGATE CIRCUS AND FLEET-STREET.

THE extensive and prominent new buildings which have for some months been in course of erection at the bottom of Fleet-street, and are known as Messrs. Cook & Co.'s tourist and excursionist offices, are now fast approaching their external completion, being almost ready for the roof, and will be covered in within the next fortnight. The structure, which will be a decidedly striking feature amidst the various new buildings now being erected in the locality, has no less than four frontages to the several main thoroughfares immediately around it, namely, the Ludgate-circus elevation, and also those in Fleet-street, Farringdon-street, and St. Bride-street. The Ludgate-circus façade, in point of architectural detail and ornamentation, may be regarded as the principal frontage, although the Fleet-street, Farringdon-street, and St. Bride-street frontages are to a great extent uniform with the first-named. The building is 60 ft. in height from the street level to the cornice below the dormers, the latter being 11 ft. high, making the entire height of the elevation 71 ft., and its width from the boundary of the Fleet-street frontage to that in St. Bride-street 130 ft., whilst it is 50 ft. in depth; the entire ground area covered by the structure being about 3,300 square feet. The materials used in the exterior are Portland stone (the ground and mezzanine floors being to a great extent of iron), with granite bases to the entrances, and polished granite piers. The building contains a basement; a very lofty ground-floor, with windows of unusually large dimensions; a mezzanine floor immediately above, together with first, second, third, and fourth stories, in addition to lofty dormers. There are two entrances to the ground-floor portion of the building in the Ludgate-circus frontage. At the bottom of the first-floor windows of this frontage (which also extends around the first floor of the entire elevation) there is a projecting balcony of ornamental ironwork. There are four windows in this story, over which are projecting carved corbels, supporting stone balconettes above at the foot of the second-floor windows, and from these are suspended carved stone pendants. Between the second-floor windows there are raised panels, and immediately above the windows there is a centrepiece in carved stone, supported on either side by scroll brackets, which forms a terminal to the centre window. The third and fourth floor windows are plainer in character, but the dormers above, which surmount the cornice, and which are carried round the entire elevation, materially add to the attractiveness of the frontage. The Fleet-street entrance has a bold and handsome appearance.

The roof will be covered with green Westmoreland slate, harmonising with the general character of the structure. The chief entrance to the interior of the upper portion of the building, as well as to the ground-floor of this portion of the elevation, will be in Fleet-street, and above the mezzanine floor to the top of the building there will be an open staircase, with a roadway of 4 ft. round it, with a lantern light in the roof.

The interior of the structure is commodious, there being not less than forty apartments, several of them of spacious dimensions, in those portions of the building which are above the ground-floor.

The ground-floor portion of the Fleet-street frontage, and also one-half of that fronting Ludgate-circus, is intended to be occupied by Messrs. Cook as their tourist and excursionist premises, as well as a portion of the mezzanine floor above, whilst the arrangements also include an entrance, through Messrs. Cook's premises, to the post-office which has been situated on the site for several years past, and which will continue there, at the rear of the new building. Portions of the ground-floor in Ludgate-circus, and half of the Farringdon-street frontage, will be let for private business purposes, whilst the other portion of the Farringdon-street ground-floor frontage, and that in St. Bride's-street, as well as a large portion of the basement of the building, will be occupied by the Midland Railway Company as a receiving-office and depôt for this part of the City. The upper portions of the building, which include a large and noble apartment on the first floor of the Ludgate-circus frontage, suitable for a board-room or other similar purposes, will also be let for business purposes.

The architect for the builder is Mr. Gundry, of John-street, Adelphi; and the contractors are Messrs. Perry & Co., of the Tredegar Works, Bow; Mr. Burch being the clerk of works.

HEALTH NEAR BIRMINGHAM.

TYPHOID FEVER has attacked twenty-two families at Moseley and Balsall Heath, near Birmingham. The Local Government Board directed Dr. Ballard to visit the locality, and he met the rural sanitary authority on Thursday, the 9th inst., and told them the substance of the report he will make to the Government Board. He finds the ground to be chiefly gravel, and therefore porous. The water supply is derived from wells sunk into the surface gravel. After explaining to the meeting the doctrine of typhoid or enteric fever, and how it is communicated to persons, he said of the examination he had made of the district (according to the *Birmingham Daily Post*):—

"In the part of Moseley where the disease had shown itself, certain conditions existed which were likely to promote its spread when once introduced. First of all, there was the system of disposal of excrement. Throughout the district, the excrement of the population was either deposited in ashpit privies, or carried from water-closets into dumb-wells, cesspools, or drains, where such drains existed. For the most part, the water-closets discharged themselves into dumb-wells, from which there was sometimes an overflow. Occasionally there were separate dumb-wells for the ordinary sewage, slops, washing water, &c.; but in other cases this refuse was discharged into the same dumb-well as the contents of the water-closets. Most of the dumb-wells had permeable walls; but in some cases they were cemented so as to be water-tight as long as the cement held good. Where there was no cement, the liquid matter soaked into the soil, and it was well known in Moseley that such dumb-wells did not require emptying for periods of many years, when they became filled with semi-solid matter. There was no question that where such wells existed, serious pollution of the soil took place. Now, if the excrement, slops, or washings of foul linen, containing the specific pollution of enteric fever found their way into the dumb-well, and then into the soil, the soil became polluted specifically. He was prepared to say that in certain instances the disease had spread through the drinking of water derived from the soil.

When, some few years ago, the Conductor of this Journal, as a member of the Social Science Association, then meeting in Birmingham, pointed out the dangerous condition of parts of the town and suburbs, his words of warning were received with derision and abusive denial.

BEJAPOOR AND ITS MAUSOLEUMS.

IN Capt. Lyon's second lecture at the Society of Arts, on "Indian Buildings and Life," he said:—

The city of Bejapoor was the Mahommedan capital for 200 years, during the time the Mussulman armies were there, trying to get to the south, the Hindoos being determined to stop them if they could. Here the only buildings remaining are the splendid mausoleums which it was the fashion of those kings to build during their lifetime to repose in after death. No doubt it was an excellent plan, but it had one disadvantage, that if by any chance the king happened to die before it was completed, there was no place to bury him in; for each king had quite enough to do to build his own before he died, and could not complete the other. Outside this town (which is the rival of Vijiannggur and Beejnuggur), with every mausoleum that these kings built, they built a small mosque alongside it, and this is the mosque of Ibrahim Rosa, and the other side is the tomb. The peculiarity of the tomb is that nobody has yet been able to discover how the dome is supported. Our engineers have actually asked the Government to be kind enough to allow them to pull it to pieces, in order to discover what supports it. Of course, the Government objected; but, springing out of a flat stone roof, there it stands, and by what means it stands, and why it does not come down, nobody can make out. It ought to, but it does not. All round this building is a verandah, immediately outside the room in which the body reposes. Formerly nothing could exceed the beauty of that verandah. The stone is grey. The whole of the Koran is supposed to be engraved in relief on the walls. It was all gilded, and between the letters was painted a most beautiful, lovely azure blue: and the effect of the gilded letters on a blue ground and the grey stone was something beautiful beyond all conception. Unfortunately, now, except in one or two spots, which were carefully covered up, every sign of it has disappeared; but the natives there show you the blue and gold as it originally stood. Inside the room is where the body reposes. The window above is a solid block of stone, which has been carved into Arabic letters, which every one knows are difficult enough to write; but here the natives have cut away the whole of the stone, leaving nothing but the Arabic letters; and several verses of the Koran are cut in tracery over that window, each window having different parts of the Koran engraved on it, as you see there.

JOSEPH'S TOMB IN SHECHEM.

IN a paper read last week on "Joseph's Tomb in Shechem," at the rooms of the Society of Biblical Archæology, Conduit-street, by Professor Donaldson, he said that there were few incidents in the Sacred Scriptures more touching than the narrative of the pious care with which the children of Israel fulfilled the injunction of Joseph to carry his bones to the land of promise. There is hardly any spot in Palestine which combines, as this does, the tradition of past times and the concurrent assent, as to its authenticity, of the varied sects, whether Samaritan, Jewish, or Turkish; and this is the more remarkable in a country where the struggles of religious strife are so prevalent, and every holy spot is so much the object of violent contention. The approach to the valley of Neblous, at the point where this old ruined tomb stands, is most impressive. Hermon, with its snowy top, rises majestically in the far North. Close to the tomb is Jacob's well, where our Saviour conversed with the Samaritan woman. The well is most frequently dry, and very much choked with large stones. Not far distant is the enclosure of Joseph's tomb, rhomboidal in shape, the inside shorter side measuring 15 ft.; the depth somewhat exceeds that dimension; and the enclosure walls rise some 7 ft. high, with an opening at one end. Opposite the entrance is a small *mihrâb*, or prayer-niche, about 2 ft. 6 in. wide, with a circular head: and over it are two inscriptions—the upper one in Hebrew characters, the latter in Samaritan. A narrow, irregular, central, paved path leads from the entrance up to the niche; and on each side, rising 6 in. or 7 in. above the path, is a dais, the one to the left forming a kind of prayer-platform or seat. On the dais to the right is the tomb of some Mahomedan, which is said to be held in great veneration by his co-religionists. At each end of this tomb is a detached pillar or post, some 18 in. in diameter, and rising about 3 ft., scooped out on the upper surface into the shape of a hollow basin, and which has the appearance of having served for fire. The tomb of the Turk is oblong in shape, and rises from the dais in a curved form, with a pointed ridge. The construction of the whole is of the roughest materials, plastered over, as is the custom of such sepulchral erections of the Turks, and has considerable cracks in the walls, threatening speedy destruction. When we consider the pious reverence with which Moses and the descendants of Joseph conveyed their precious relic from the land of bondage, we may conceive that, although the present erection may be on the spot of its ultimate deposit, it is but reason-

able to suppose they followed the custom of the Egyptians, among whom they had so long dwelt, and with whose manner of interment they would have been so well acquainted. If so, they must have made a considerable excavation in the ground, consistent with the exalted position of their forefathers. They must have lined the tomb with stone, and have laid the embalmed body, with its wooden sarcophagus or coffin, with becoming funeral rites. Without making an excavation, it is impossible to ascertain any further particulars of this sacred and interesting spot.

ANCIENT TERRA-COTTAS OF SYRIA.

THE incredulity with which the objects of idolatrous art, recently discovered in Moab, and of which Lieut. Conder sent water-colour sketches to the Palestine Exploration Fund, were received in this country must now be at an end. Some time since, the report of Pastor Weser, the Prussian chaplain at Jerusalem, who himself visited the sites of excavation, was published. An attempt was made to throw doubt even upon that. Now, Mr. Greville Chester, one of the opponents of the genuine character of the objects in question, writes from Jerusalem a full recantation. He says that he has examined the collection of Mr. Shapira, and is convinced of its genuine character and extreme importance. At Berlin the same conclusion was long since arrived at, and Pastor Weser has been elected a member of the Oriental Society, in consequence of the light he has personally thrown on the subject. Lieut. Conder's sketches were confined to the most striking objects, from an art point of view. Some of the jars are covered with incised characters, which, in some cases, are bi-lingual. The British Museum authorities based their condemnation of some of the jars, as forgeries, on the ground that they were impressed with unknown, as well as with well-known characters, a thing most unlikely for a forger to attempt. While we regret that these objects are lost to this country, it is very instructive to see the different tone in which any indication of important discovery is met in Germany.

CHINESE TEMPLES.

THE China correspondent of the *Daily News* gives some interesting particulars of temples in Pekin. It may be useful to our readers to preserve a portion of what he says as to the so-called Temple of Heaven, the most important of them:—

To the eye of a European there is nothing about it to suggest its ecclesiastical character. It is more like one of the fanciful creations of gardener-artists, reminding you of the gardens at Versailles or the Crystal Palace. The circular space on the top looks as if intended for a band to play on. It is somewhat larger than one of the fountains in Trafalgar-square, with a pavement and balustrade of white marble. It stands on two other platforms, all formed of the same material, forming three terraces, each terrace being ascended by a flight of nine steps, or twenty-seven in all, from the ground to the top of the altar. There are four ascents, one from each of the cardinal points. The whole is surrounded by a low wall, with open marble gateways on each side, facing the four ascents. This wall is square in plan, and in the south-east corner is the furnace or altar for burning the bullock, with eight other altars, smaller, and of iron, where offerings to the eight deceased ancestors are also burned, the bullock being offered to Shang-ti alone. . . . . To those who have taken an interest in Professor Smyth's inquiries respecting the Great Pyramid, this Chinese temple ought to have special significance. Although round in plan and flat on the top, it may still be described as a modification of the Pyramid. Its astronomical character is indicated by the great ceremony at the winter solstice. The four ascents, with approaches and gates to the four cardinal points, suggest that an astro-geographical meaning was intended. Most of the imperial temples of Pekin have been constructed with reference to the relation of numbers, and this is particularly marked in the Temple of Heaven. The number nine figures very largely in it. The ascent to each terrace has nine steps, the whole ascent being $3 \times 9 = 27$. The pavement on the circular top is formed by nine circles of marble slabs. The centre circle has nine slabs, the second is formed of eighteen, the third twenty-seven, and so on, each circle being a multiple of nine, till, at the outer circle, it is $9 \times 9 = 81$, being a favourite number in Chinese philosophy. "The same symbolism is carried through the balustrades, the steps, and the two lower terraces of the altar. Four flights of steps, of nine each, lead down to the middle terrace, where are placed the tablets to the spirits of the sun, moon, and stars, and the year god, Tai-Sui. The sun and stars take the east, and the moon and Tai-Sui the west. The stars are the twenty-eight constellations of the Chinese zodiac, borrowed by the Hindoos, soon after the Christian era, and called by them Naksha-tras. The Tai-Sui is a deification of the sixty-year cycle. The present year, 1869, is the sixth year of the cycle, and is denoted by the characters Ki-si, taken from the denary and duodenary cycles respectively. For this year the tablet is inscribed with these characters; in 1870 the characters Keng-wu, next in order, will be taken, and so on."

The work quoted from was published about two years ago, which explains the reference to 1869 and 1870. The same work gives a further illustration of these numbers:—"The balustrades have $9 \times 8 = 72$ pillars and rails on the upper terrace; on the middle terrace there are 108; and on the lower, 180. These amount in all to 360, the number of degrees in a circle. The pavement of the middle terrace has in its innermost circle ninety stones, and in its outermost 162 stones, thus reaching the double of eighty-one, the outermost circle of the upper terrace. So again, in the lower terrace the circles increase from 171 stones, the innermost to 242, or three times the square of nine for the outermost."

ASSYRIAN RESEARCHES.

FIRED by American example, the proprietors of the *Daily Telegraph*, with the concurrence of the trustees of the British Museum and the Lords of the Treasury, have arranged to despatch Mr. George Smith (the decipherer of the tablets relating to the Deluge) to Assyria for further explorations. They propose to devote to the object 1,000 guineas within a period of six months, and are willing to exceed those limits if found desirable. Mr. Smith's official salary will continue. Any memorials of interest discovered will be added to the present collection of Assyrian antiquities in the British Museum. We are glad the Government have met the proposition as they have done, and we heartily wish success to the expedition.

PROCEEDINGS UNDER THE NEW HEALTH ACT.

Macclesfield.—The rural sanitary authority of the Macclesfield UNION has directly refused to appoint a nuisance inspector under the Public Health Act, as required by the Local Government Board, notwithstanding that scarlet fever is prevalent to an alarming extent in the Bollington district. On being rebuked, and urged by the Local Government Board, they passed the following resolution by a majority of fifteen to four:—

"That Mr. May be instructed to write to the Poor-Law Board requesting them to accept the appointment of our relieving officers for nuisance inspectors, and that we require none of their paltry allowance, and trust they will interfere less in their official capacity with the Board of Guardians."

Chester.—A meeting of representatives from the different sanitary authorities of Cheshire, has been held in the Town-hall, Chester. The Local Government Board inspector for the district, at whose invitation the first conference of representatives was held, was present. The different authorities were represented. After some further discussion, it was agreed to send copies of the following resolution to the different sanitary authorities in the county:—

"That the undermentioned sanitary authorities, being desirous of combining for the joint appointment of a medical officer of health, be especially requested to name ——— members to form a joint committee to decide on the salary of such officer, and the terms on which he be appointed; to advertise for candidates, and to select one gentleman to be recommended for appointment by the several combined authorities."

Worcester.—A conference of urban and sanitary authorities has been held in the Shire-hall, Worcester, under the presidency of Lord Lyttelton (lord-lieutenant of the county), for the purpose of considering whether the medical officers of health to be appointed under the new Sanitary Act should be appointed by several combined districts to supervise a large area, or whether each sanitary authority in the county should appoint its own officer independently of its neighbours. The urban and rural sanitary authorities of the following nine unions were represented:—Worcester, Droitwich, Bromsgrove, Kingsnorton, Pershore, Upton-on-Severn, Kidderminster, Martley, and Tenbury. It was ultimately resolved, with four dissentients only,—

"That the principle of comparatively wide combinations of sanitary authorities is the best upon which the Public Health Act can be carried out."

COLOUR DECORATION.

ST. MARY MAGDALENE, WANDSWORTH COMMON.

THE chancel of this mission church has lately been decorated in colour by Mr. Charles Hudson, of London. Mr. Edmund B. Ferrey, architect, in the first place gave a slight sketch for the general scheme, and has from time to time been in communication with Mr. Hudson, to whom was intrusted the preparation of the full-size working drawings and the details of the colouring. The church is substantially built of stock bricks, being rough stuccoed internally. The scheme for the decoration of the east wall consists of a plain surbase of chocolate tint; above this are ten square cusped panels, with canopies over of a rich description, containing the emblems of the Passion in various colours; the background is of gold. The hollow of the string-course under the east window is decorated with gilt stars, and over the altar in addition with the *fleur-de-lis*. At the springing line of the window-arch are arranged the emblems of the twelve Apostles and of St. Mary Magdalene, in lozenge panels. The space over is enriched with bold flowing scrollwork, formed of the vine on the north, the maple on the south side. In the centre of each spandrel is a circular panel, containing a subject from the life of St. Mary Magdalene. The east window, which formerly had a bare, close spandrel, has been perforated, and the rest of it glazed with cathedral glass in different shades, ornamentally arranged. The side-walls are also decorated, the bands and horizontal divisions being carried round, but there are no emblems or subjects, and the treatment generally is more simple. The wall over the altar, being covered by a dossel, has not been decorated in colour. The tints principally employed are Mediæval red, with a little black and chocolate. The panelled ceiling, however, has for a ground tint a greyish blue, with pateræ. The space over the west side of the chancel-arch is also decorated, the principal feature being that of our Lord sitting in majesty, inclosed by an aureole. In addition to these works, a beam, carrying a rich oak floriated rood, designed by the same architect, decorated in colour and gilding, containing the Evangelistic emblems, has been fixed over the entrance to the chancel.

IRISH BUILDING MATERIALS.

IN a short notice of the Reports on the Dublin Exhibition just now closed, the Society of Arts' *Journal* says,—

The slates shown by the Killaloe Slate Company were of excellent quality, and equal, if they do not excel, the best Welsh slates. The Ventnor Slate Company also showed slates of good quality, and with a very pretty greenish and bluish shade, which would produce a good effect in roofing churches, &c. The specimens of Donegal stone shown attracted much attention. The granite blocks were exhibited just as they were found in the quarries, in slabs, with even, natural surfaces, and almost, if not quite, ready for the builder. The polished red granite is quite equal to that from Aberdeen. The Belfast Portland Cement Company contributed a large number of samples of their production; the articles shown were in every respect excellent. A group of marble pillars or clustered columns of various Irish marbles, with Caen stone basement and cap, carved in natural foliage, and a font in the same style, with various Irish marble shafts, admirably displayed the wealth of the native quarries, and showed the ease with which such materials can be adapted to useful and decorative purposes. The great beauty of the marbles and the high polish and finish they had received, displayed to great advantage the green and black marbles from the quarry near Middleton, in the county of Cork, which is worked by Messrs. Sibthorpe & Son. The latter is little inferior in brilliancy, variety of shade, and contrast of colour and tone

to jasper. For this reason it has been technically named Irish jasper. The practical value of Irish marbles, and the high polish they are capable of taking, were further successfully illustrated by specimens of marble pavement, and by a portion of the altar railings lately erected in the chapel of Trinity College; this last showed the rare qualities of solidity joined to grace and the appearance of lightness.

THE NEW DWELLINGS FOR THE POOR NEAR THE HOLBORN VIADUCT.

ACCORDING to a communication which has just been received by the Holborn Vestry from the City Corporation, it appears that the latter have at length finally decided as to the new dwellings for the poor to be erected in room of the houses removed for the construction of the Holborn Viaduct. The clerk to the Corporation states that the plans for the dwellings are in a forward state of preparation, and that the buildings will shortly be commenced. It appears that the site selected is in Bleeding Heart-yard, a short distance to the northwards of the Viaduct.

SCHOOL BOARDS.

London.—The following report has been presented to the London School Board on the new offices on the Thames Embankment:—

"On the 26th of June the Board decided that four architects should be invited to send in competitive designs for the offices to be erected on the Thames Embankment. The Works Committee were further instructed to make the necessary selection. In accordance with their instructions, the committee invited four gentlemen to send in designs. The conditions and particulars were settled by the Board on the 28th of August, and the designs, which were sent in at the close of November, have now been carefully examined. In arriving at a conclusion, the committee have not only considered how far the original conditions have been complied with, but have given especial weight to the amount of well-lighted floor space supplied by each architect, and to the estimated cost of the proposed building. On the whole, the committee have unanimously resolved to recommend that Mr. Bodley, whose plans are estimated to cost 19,800*l.*, be appointed to carry out his design, subject to the provision that a tender can be obtained from a responsible builder, in accordance with the conditions under which the Board have hitherto employed other architects. They further recommend that Mr. Bodley's plans be referred back to them for such modification as they may consider necessary; and that they be instructed to draught specifications, to obtain tenders, and to bring up a contract to the Board for sealing."

The report was adopted.

Dewsbury.—The foundation-stones of the first three schools projected by the Dewsbury School Board have been laid with public ceremonies.

Northampton. — The chairman invited the Board to consider the best mode of adjudicating upon the plans for the new schools, which are to be sent in or before the 27th inst. The clerk had informed him that there had been 144 applications made for particulars respecting the proposed new schools, and if only fifty of these sent in plans, there would be a hundred designs to be examined, in order to which it was necessary they should be suspended somewhere. He suggested whether it would not be advisable that a sub-committee should be appointed to look over the plans, with power to reject any of them; but if half the number named were rejected, it would still be necessary that the remainder should be deposited somewhere for inspection and examination. Ultimately it was agreed that the clerk should arrange with the town-clerk for suspending the plans in the large hall.

Hanslope. — At Hanslope, situated on the southern border of Northamptonshire, in the county of Bucks, the new school-rooms, which have been recently erected under the direction of the Hanslope School Board, have been opened. The buildings are erected with white brick, relieved by red strings, and are to accommodate 220 children. Mr. Christopher, of Watford, was the architect; and Mr. John Sheldon, of Newport Pagnell, the builder. The schools are situated upon the west side of the road, leading through the parish, and consist of mixed school, 45 ft. by 18 ft.; class-room attached, 14 ft. by 15 ft.; babies' room, 20 ft. by 17 ft.; and infant school, 30 ft. by 17 ft. There are also a master's house and requisite out-offices.

Leeds.—A meeting of the Leeds School Board was held last week, Sir A. Fairbairn in the chair. Among the topics discussed were the correspondence with the Education Department respecting the Board schools, the management and visiting of the schools, the payment of architects' commissions, the question of providing a training college, and the designs for Jack-lane School.——At the meeting of the deputation from the local Board with the Vice-President of the Council, it was arranged that the council's "architect would forward to the Board a memorandum on the whole subject, and he (Mr. Forster) would ask the Board once more to consider the question in connexion with the memorandum; and if the Board after that decided to adhere to their proposals, he did not think the Department should withhold their recommendation to the Loan Commissioners." Mr. Forster alluded to the question of the costs of the schools; and Mr. Jowitt stated that the Board were most anxious to keep down the expense as much as possible, and that they believed they had done all in their power to obtain good schools at small expense; payment for the schools was to be spread over fifty years, and they felt bound to erect strong and substantial structures.

PROCEEDINGS UNDER THE METROPOLITAN BUILDING ACT.

ON the 1st instant, Mr. Arthur Wilson appeared before Mr. Hannay, at the Worship-street police-court, in answer to a summons for neglecting to give due notice to the district surveyor of Shoreditch and Norton Folgate, of certain works done at No. 4, Spital-square. The work for which notice was claimed, was the rebuilding of an addition at the back of the house. The district surveyor had discovered some work in progress at the premises, and was informed that it was being done by a builder named Brown, from whom, after some difficulty, a notice for the work was obtained. This work was completed, but the rebuilding of the addition was not then commenced. This was some time subsequently found to be in progress, and it was ascertained from the workmen that they were employed directly by defendant, who was described as the "owner" in Brown's notice, but no fresh notice could be obtained from defendant, whose address the district surveyor was for some time unable to obtain. In the course of the work, a notice of irregularity had been served at the premises in defendant's name, as builder, and the irregular work was then amended. The district surveyor contended that the rebuilding of the addition was not included in the notice given by Brown, or if it was then a notice of change of builder should have been given.

Defendant stated that he was the owner of the premises; that he had not employed any builder to carry out the work; that Brown was only acting as his foreman; and that he considered the notice given sufficient. Mr. Hannay considered that defendant had acted as the builder, and should have given notice in his own name, which, by his own admission, he had not done. Fined 40*s.*, and 2*s.* costs.

THE DISPOSAL OF SEWAGE.

THE youngest of the local Boards in the neighbourhood of Manchester—that of Heaton Norris, which comprises the districts popularly known as Heaton Chapel, Heaton Moor, and Heaton Mersey,—has recently called in the aid of Mr. James Henry Lynde, C.E., of Manchester, to advise on the system of drainage to be adopted, and the method of disposing of the sewage. Mr. Lynde has had to formulate a new and comprehensive scheme, and in doing so has considered and reviewed various methods recently devised for the removal and disposal of sewage matter.

His own conclusions are these:—

"My opinion is decidedly in favour of a combination of either filtration or deodorisation (upon the Carlisle system, which has proved so successful) and irrigation. Irrigation is the only system that has really effectually prevented the fouling of rivers, and at the same time prevented the waste of the valuable manuring material contained in the sewage.

Should you adopt the system I have advocated, it will be necessary to erect filter-beds, together with the necessary buildings and works for the treatment of the sewage, with the carbolic acid or other deodorising agent, which works will be of an inexpensive character.

The land which might prove most suitable for irrigation consists of two plots, one containing fifty-six acres, which is intersected by the railway, and the other containing twenty acres. These would be provided with main carriers for the effluent water, after being deodorised, along the highest parts, which, after filtering through the soil, would be caught by the deep drains, and be carried off in a pure state to the River Mersey.

In laying this report before you, I trust that sufficient evidence has been given to enable you to arrive at some general mode of action. The cost so much depends upon this that I have found it impossible to submit any estimate with this report."

COMPETITION DECIDED.

START'S HILL ESTATE, ORPINGTON, KENT.

MR. J. LOVIBOND, the owner of this freehold estate, which contains nearly one hundred acres, invited architects, in September last, to submit plans, in public competition, for laying it out. Several were sent in answer to the invitation. The task of adjudication was left to a committee of gentlemen, how appointed we do not know. Mr Lovibond has awarded, on their recommendation, the first premium of 30*l.* to the authors of the design bearing the motto, "Comme il faut" (Mr. T. Batterbury, and Mr. J. Kiddle), and the second premium of 10*l.* to the author of design marked "Bonheur" (Mr. Lewis Solomon). Messrs. T. Batterbury & J. Kiddle, consequently, have been appointed surveyors to the estate.

THE CHURCH OF WETZLAR, GERMANY.

THE great Church of Wetzlar, on the Lahn, though far from being one of the most beautiful or perfect ecclesiastical edifices in Germany, is certainly one of the most curious and interesting. Like many other large churches, it is a complete epitome of the architecture of the country, and for studying the growth and development of Gothic architecture, from the very early and rude Romanesque down to the latest and most eccentric vagaries of German Third-pointed work, we know no building in all Germany where this can be done more thoroughly than in the Church of Wetzlar. We shall not now attempt to describe the exterior of this singular church, as we may have occasion to do so on a future occasion, but shall confine ourselves to the interior. In plan and general arrangement, the Church of Wetzlar consists of a noble and lofty nave, and aisles the same height, attached to the west of which is a singular Romanesque front, with two small towers and a shallow porch between them. To the west of this is an unfinished and roofless addition of late date. There are spacious transepts of singular design: that to the south is beautiful Geometric work, and that to the north, of which we give a view, is rich and fully developed fourteenth-century work. The vaulting of these transepts is singular, and very original. It is treated as though the transepts were apsidal. This will be best understood by reference to our view. The singular arcade below the windows is evidently of earlier date than the superstructure, and is a peculiar example of the very latest German Romanesque work. A fine fourteenth-century rood-screen, consisting of three canopied arches opening to the same number of vaulted bays, separates the choir from this portion of the church. Two of the bays of this rood-screen contain doorways, which open into the choir, whilst the middle one has a glazed grating looking into the choir: in front of the centre bay is an ancient altar, with a slab of black marble, which is not marked with five crosses, as as is usual in all ancient altars we have seen, but with four "tau" crosses at the four angles: this is so singular that we should much like to have some explanation of it.

Beyond this screen is the choir, which is lower than the nave, but very spacious. It has side aisles, and a fine clearstory, and is closed to the east by a noble five-sided apse, with two-light windows in each bay. In front of the clearstory windows is an arcaded passage, and the whole is finely vaulted.

This choir is a noble example of pure German First-Pointed work, and dates from the middle of the thirteenth century. The nave of this church is used by the Lutherans, and the choir by the Catholics. As they are only separated by the before-described rood-screen, of course the religious services take place at different times in the day. The choir is neatly fitted up, and has a modern Gothic high altar, of tolerably good design. It also contains a few singular stalls under the rood-screen, some ancient monuments to priests, and one or two fine life-sized statues in stone. In the nave of the church is an ancient font, a chandelier of the earlier part of the sixteenth century, of coloured iron, and two singular ancient groups of figures, now enclosed in modern cupboards. One is a "Pieta," the most grotesque and repulsive treatment of the subject we have ever seen. The other represents Our Lord's triumphal entry into Jerusalem, and originally used on Palm Sunday for the procession. These date from the commencement of the sixteenth century, and are singular though not beautiful examples of the art of that date.

THE CHURCH OF WETZLAR, ON THE LAHN, GERMANY.—*Interior of North Transept.*

WAREHOUSES, FORE-STREET, CORNER OF MILTON-STREET, CITY.

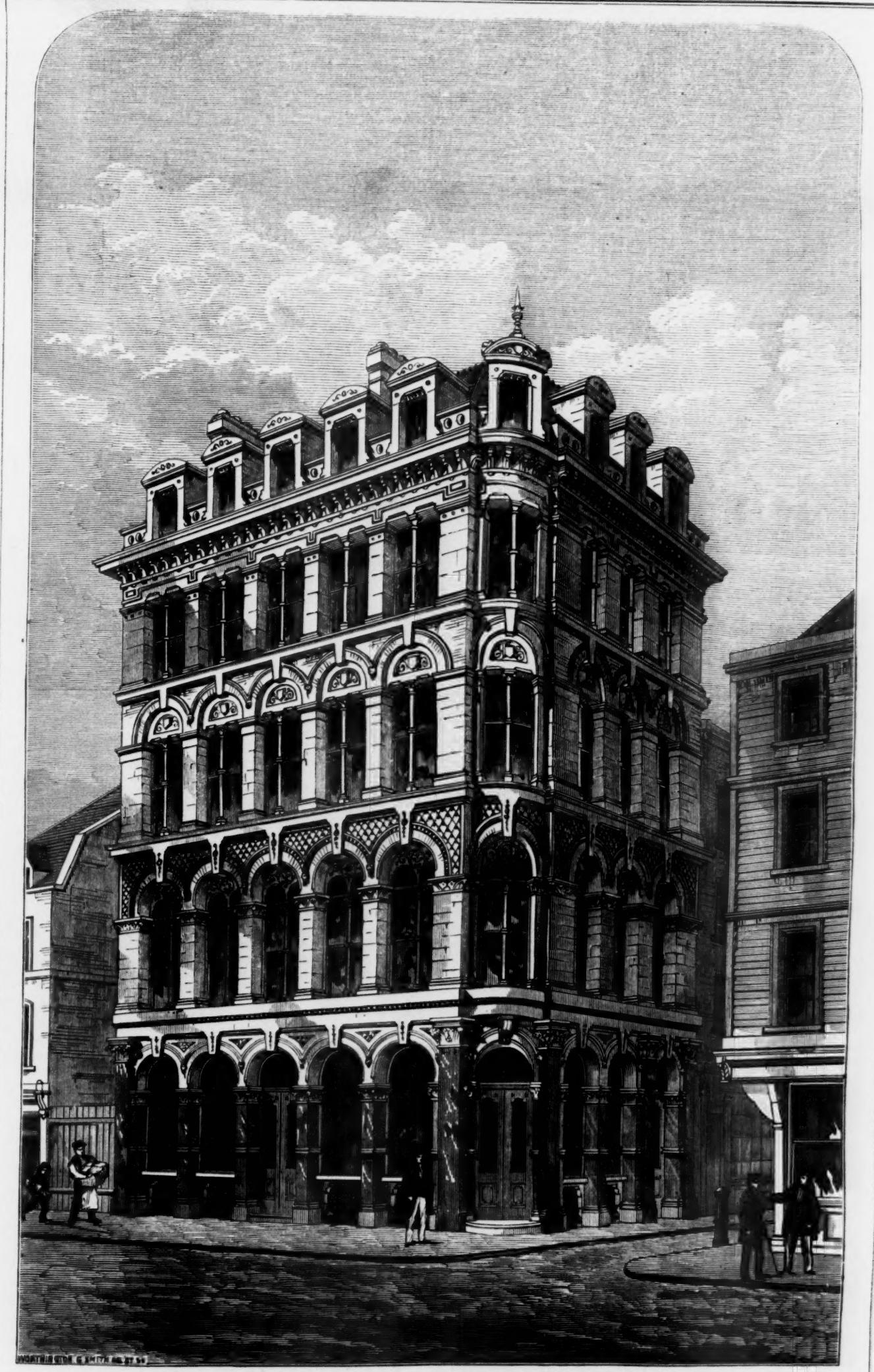
THE buildings shown by the accompanying engraving are two warehouses just erected in Fore-street, at the corner of Milton-street, City. They occupy the site of some very old timber erections, similar to those now standing (and shown in the view) on the opposite side of Milton-street.

The new buildings have a frontage towards Fore-street of 35 ft., that next Milton-street being 26 ft. The piers, strings, and main cornice of the fronts are of stone; the rest is of brick, some portions of which are of Pether's pressed bricks. The piers of the ground-floor are of marble; the entrance-lobbies of oak.

We believe this to be the commencement of an improved class of buildings in Fore-street,—a street that will very well bear much improvement, consisting, as it it does, of a great mixture of new, and valueless old buildings. The neighbourhood itself is full of associations, and very interesting.

This block has been designed by and carried out under the superintendence of Messrs. George & Henry S. Legg, architects; Mr. William Brass being the builder.

Ramsgate.—Mr. E. Ellice-Clark has been appointed surveyor to the Ramsgate Local Board and Improvement Commissioners.



WAREHOUSES: FORE STREET, CORNER OF MILTON STREET, LONDON.

MESSRS. GEORGE & HENRY S. LEGG, ARCHITECTS.

YORKSHIRE ARCHITECTURAL SOCIETY.

THE annual meeting of the members of this society has been held at the School of Art, Minster-yard, York, the Dean of York in the chair.

The Rev. George Rowe read the report, which stated that for the first time for several years the committee had to report the loss of many members by death or resignation, without any corresponding increase in numbers. The finances, however, were in a satisfactory condition, and there was a large balance in hand. Referring to what was said last year concerning the publication of *fac similes* of ancient stained glass in the Minster, the committee had to regret that circumstances had prevented its progress, so that nothing had been done. The report concluded by a reference to the progress of the works connected with the restoration of the south transept of York Minster, which, under the able direction of Mr. Street, was being rapidly placed in a safe condition.

The report was unanimously adopted. The officers and committee were re-elected for the ensuing year, and Mr. W. D. Husband, Bootham, and Mr. Bradley, Precentor's Court, were admitted members of the society.

The Rev. G. Ornsby, vicar of Fishlake, read a paper on "Yorkshire Churches and Yorkshire Wills;" and the Rev. G. Rowe, principal of the York Diocesan Training College, read one on the five-light west window in the church of St. Martin, Coney-street, York.

SALE OF BUILDING LANDS, LONDON AND WESTMINSTER.

DURING the present week, the Metropolitan District Railway Company have submitted for sale by auction some valuable property and surplus building-land in the City and Westminster. The total value of the land and buildings which have been offered, and to a certain extent sold, is estimated at upwards of 220,000*l*. The sales took place on Tuesday and Wednesday, at the Auction Mart, in Tokenhouse-yard. The property sold on Tuesday is situated in the City, and consisted of four lots, Messrs. Debenham, Tewson, & Farmer being the auctioneers. The first lot consisted of freehold premises in Queen-street, Cheapside, and Great St. Thomas Apostle, adjoining, containing an area of 1,060 sq. ft. This lot was put up at 3,000*l*., and was ultimately sold for 4,900*l*. The second lot consisted of freehold premises in Great St. Thomas Apostle, containing a large warehouse occupying an area of 1,435 sq. ft. For this lot 6,200*l*. were offered, when 6,500*l*. were named as the reserve, and as there was no advance on this sum the lot was withdrawn. The next lot offered consisted of freehold property, in Love-lane and Botolph-alley, Eastcheap, containing 3,100 square feet, now occupied by several small buildings and ware-rooms of an inferior character, but on which it is expected blocks of warehouses will be erected on the expiration of some existing leases, which terminate in a few years. In reference to this lot the auctioneer stated that the Corporation was about to make a new street close to the property, which would materially improve its value. Before the bidding for the lot commenced, a gentleman present complained that the conditions as to the height of new buildings to be erected on the land contained too stringent restrictions; whereupon the auctioneer observed that there was not any plot of land in the City, containing 3,100 square feet, where a builder could carry a building to any height he pleased. After a spirited competition this lot was sold for 6,200*l*. The last lot offered was the largest and most important of the whole. It consisted of leasehold property in Cannon-street, near the Cannon-street Station, comprising a block of large warehouses and offices, covering an area of 7,100 square feet. These premises are held by the railway company under a lease for 72 years, from Christmas, 1858, at a ground rent of 1,115*l*. per annum, and are let by the company on an under-lease to the India-rubber, Gutta Percha, and Telegraph Works Company for 21 years, from 1867, at 2,500*l*. per annum. The biddings for this lot commenced at 10,000*l*., and increased to 18,000*l*., when 20,000*l*. were named as the reserve, and there being no further advance, the property was withdrawn, the auctioneer stating that as the company were very anxious to sell, they were open to receive an offer by private contract.

The company's surplus lands offered on Wednesday consisted of an extensive plot of freehold land in Broad Sanctuary, Westminster, containing an area of 2a. 0r. 11p., within view of the Houses of Parliament, Westminster-hall, and Government Offices, and offering an opportunity for the erection of buildings for national or other purposes. The property was divided into two lots, and its estimated value was set down at about 180,000*l*. Messrs. Rushworth, Abbott, & Co. were the auctioneers, who stated in offering the property that there was not in the whole metropolis an equally large or eligible building site. There being no offers for either lot, the property was withdrawn, the auctioneer stating that the railway company would be willing to receive offers for building plots in smaller quantities.

ARCHITECTURAL ASSOCIATION OF IRELAND.

A GENERAL meeting was held on the 9th instant, the president, Mr. J. J. O'Callaghan, in the chair. The following registry rules, being approved of by the committee, were submitted to the general meeting and confirmed:—

"1. That the registry be open, without fee, to all members of the Association requiring engagements.

2. That the assistants should state the salary required and qualifications at time of registry.

3. That should an assistant be engaged through the registry or otherwise, he shall let the secretaries know in writing, that his name may be withdrawn.

4. That practising architects be noticed by advertisement that the registry is open, and be requested to apply to the secretaries should they require assistants."

Mr. J. L. Robinson, hon. sec., then read a paper on "Architectural Perspective." A discussion followed.

Mr. Longfield, hon. sec., Mr. Early, Mr. Holmes, and others spoke.

The next general meeting will be held on the 30th inst., when Mr. E. Trevor Owen will read a paper on "Architectural Details in Common Use."

PROPOSED "COUNTY COLLEGE."

THE Rev. J. L. Brereton's "County College" scheme is advancing, and likely, we are told, to be entirely successful. It meets with the approval of the tutors and heads of houses in Cambridge, and has promises of support from nearly all who have been instrumental in establishing the county schools.

The plans embrace on ground-floor a large central hall, round which are grouped eight common rooms, 50 ft. by 25 ft.; library, board-rooms, tutors' rooms and library; porter's and steward's rooms. At each end of the principal front are residences for principals, chapel, and lecture-hall.

Above the common rooms are three stories of bed-rooms, each of the 300 students having a small room of about 10 ft. by 7 ft. 6 in.

The front centre of the building is occupied by officers, servants, and so on; the dining-hall and kitchen being above.

The estimated cost is 20,000*l*. The architects are Messrs. John Giles & Gough, and the plan generally is somewhat on the model of the Norfolk County School, now being erected by them, of which the Prince of Wales is the patron.

FALL OF FLOOR IN THE BELVEDERE ROAD.

ON Friday in last week an inquest was held at the King's Head Tavern, Belvedere-road, Lambeth, before Mr. William Carter, coroner for East Surrey, on the bodies of George Bars, aged 63, and William John West, aged 49, who were killed on Thursday by the falling in of a floor at Darfield Wharf, belonging to Mr. Beaumont, of the Belvedere-road. Some tons of oats were stored in the upper part of the premises, and the two deceased men were standing below with a horse and cart when the floor above them gave way, and they were buried beneath heaps of grain. On being extricated it was found that both were dead. The cart near which they were standing was smashed to pieces, and the horse attached to it was killed.

The substance of the evidence bearing on the strength of the building and the state of the ruins and cause of the fall was as follows:—Henry Howlett (who said he built the floor), resided at No. 5, Cheltenham-place, Pimlico. Witness was present when the accident happened. He heard a crash, and turning round saw that the end of the floor had fallen. He found that 30 ft. square of flooring had given way, and the corn had fallen. He had no conception of the weight of corn on the floor at the time it fell. He had since, at the request of Mr. Beaumont, inspected the scene of the accident. He thought the beam gave way about half-way from the wall to the iron column in the centre, that was about 15 ft. from the entry from the yard. The height of the beam from the ground was about 10 ft. The floor was supported by one entire beam from wall to wall, which was supported in the centre by an iron column. One half of the beam had given way between the wall and the column. Witness did the labour for the building of the floor. He knew the beam rested on stone corbels. The half of the support had broken away. He had examined that part and found that the beam gave way between the wall and the column. That was his opinion. By reason of that giving way the flooring came down. The beam carried joists from another timber at the end. Witness examined the part where the timber broke. He could not see any defect in it. He presumed that the beam broke from the superincumbent weight of corn. He did not see anything to lead him to suppose the beam had been tampered with in any way. There was no doubt in his mind that the deaths were due to the beam suddenly breaking. He did not think the accident could have been foreseen.

By the Jury.—When he built this he had the instructions of the manager. He considered that the floor was capable of bearing any weight that could be put upon it, considering that the ceiling was a very low one. The length of the building was 100 odd feet.

By the Solicitor for Mr. Beaumont.—Witness erected the beam, and he considered it calculated to bear any weight that could be put upon it. He had been upon the premises a few days before the accident. He was called in by Mr. Beaumont to give his opinion upon the stability of the building. His attention was drawn to a slight deflection in the end towards the river. Mr. Beaumont and Mr. Batstone were present; Mr. West (the manager) was also present. His opinion was asked whether he thought there was anything wrong. He gave it as his opinion that some support should be added to the beam near the river; but he thought the other beams were perfectly safe. He had no knowledge as to what weight the beams were calculated to resist.

By the Coroner.—He believed that corn had been placed on the floor which gave way, but not so much as had been put there when the accident happened. He could not speak decisively, but he thought that this was the largest lot that had ever been on the floor. In his opinion Mr. Beaumont had used every reasonable and proper precaution against accident.

By the Jury.—The girder went 9 in. into the wall. The stone corbels were flush with the wall.

Mr. Beaumont was examined by his solicitor. He said that it was suggested to him to have this building erected, and Mr. Duff was suggested as the builder. He put up a part of the building. Mr. Duff was told that the resisting weight of the floor should be to the extent of 5,400 quarters of corn. Mr. Duff prepared the drawings, and witness asked an architect to tell him what the floor would bear. The drawings were submitted to an engineer, who said the floor would bear 50 tons between each of the columns. There were about 400 quarters of oats on the floor which broke; that would be about half what the floor was estimated to bear. He had the most perfect confidence in the erection of the building. A few minutes before the accident he was under the floor himself. He was of opinion that the statement made by the witness Howlett with regard to the breakage was quite correct. On the day before the accident he noticed a deflection in another part of the premises, and told West not to put any more corn there. The witness Howlett was called in and inspected the whole of the beams, and gave it as his opinion that the beam which gave way was perfectly sound. Everything that could be done was done for security in the erection of the building. Mr. West made any suggestion he liked.

By the Jury.—The floor was calculated to bear the weight of 50 tons between the pillars, and there were about 50 tons on the floor altogether, that would be about 25 tons between the pillar and the end walls."

The Coroner having summed up the evidence, the jury returned a verdict of Accidental Death, suggesting that two iron columns should be used as supports in the place of one as heretofore;—a mere rule-of-thumb suggestion, we may add.

As regards the statement that "the stone corbels were flush [*sic*] with the walls," the question might be asked, What is a corbel? Surely there is no such thing as a corbel where the stone is flush with the wall? Even the size of the beam is a point in question.

OBSTRUCTION OF LIGHT.

Prettious v. *Spiers & Pond.*—The plaintiff in this suit (before Vice-Chancellor Sir J. Wickens) is a hatter, carrying on his business on the north side of Piccadilly, at No. 3, and in the front of his house facing that street are nine "ancient windows." The defendants recently purchased the houses on the south side of Piccadilly, opposite the plaintiff's shop, pulled them down, and erected on the site a large building intended to be called "The Criterion," and to be used as a restaurant. The distance between the premises of the plaintiff and those of the defendants was 52 ft. or 54 ft. and the height of the buildings originally purchased by them was about 53 ft. They had, however, so constructed their new premises as to make them, on the whole, 51 ft. higher than the former houses. The plaintiff's case was that he had suffered great loss and inconvenience in his business from the increased height of the defendant's new structure; that previously thereto he had worked without any artificial light in winter (save an exceptionally foggy day) till four o'clock p.m.; but had, ever since the defendants had increased the height of their premises, been forced to burn gas in his shop; and he said that the frequent burning of gas where hats were kept was very prejudicial to them, by destroying their gloss and colour, and rendering constant restoration of them, at great expense, a necessity. When he became aware (as he said he "recently" had) of the height to which the defendants meant to carry their new building, he instructed his solicitors to communicate with them on the subject; and, if requisite, to apply to this Court for an injunction to restrain the defendants from erecting, or continuing, any building that should interfere with the plaintiff's light and air at No. 3, Piccadilly, as enjoyed by him. This suit became necessary. A great deal of contradictory evidence was adduced in it, from which it appeared (*inter alia*) that plans and descriptions of the defendants' proposed building had been published so long ago as March, June, and July, 1871, in the *Builder* and other newspapers; but that the plaintiff's notice was not given to the defendants till Dec. 2, 1872, and the bill not filed in this suit for an injunction till the 10th of Dec. 1873. The cause now came on upon an interlocutory motion for an injunction as above mentioned.

The Vice-Chancellor said no rule was better settled than that a plaintiff seeking an interlocutory injunction must show that he had signified to the defendants, at a reasonably early period, his intention to rely on the veto upon their proceedings to which this Court considered him entitled. Here the evidence had distinctly raised the question of "acquiescence" on the part of the plaintiff

He had but weakly supported his case. What had been done was done by the defendants with the greatest possible publicity. The plaintiff saw, or must be taken to have seen, that the building would be a large one. The slightest inquiry would, long before he filed the bill, have enabled him to know what the increased height of the structure would probably be; and on the whole case he must be assumed to have known what was about to be built before any material progress had been made. The motion must therefore be refused.

"I KNOW A HAWK FROM A HAND-SAW.'

SIR,—So vast and rapid are now the strides of the pen, and the progress of literature, that one medium is often unconsciously left behind another in the course of events. Thus it has happened that the suggestion which you ascribe to Mr. J. A. Picton, and quote from *Notes and Queries*, was made public beforehand in the *Antiquary*.

In justice to an almost unknown publication, I beg you will allow this statement to appear; the facts have already been made known to Mr. Picton, and admitted by him.

I enclose you a copy of the number in question, vol. ii., No. 30, dated June 15, 1872. A. H.

WARMING.

SIR,—About this time, either two or three years ago, there appeared a letter in the *Builder* from an architect, who had recently built himself a large house,—I think in the neighbourhood of London,—and who had succeeded in warming it, quite to his own satisfaction, by means of iron air-chambers fixed behind his room fire-places. I have read the *Builder* carefully every week since that time, hoping to find either a confirmation or a contradiction of his experience; but up to this time I have seen no other communication upon the subject. If your correspondent would say if the system continues to answer or otherwise, he would confer a benefit upon many of your readers who, like myself, wish to make coal go as far as possible in these dear times. READER.

WHITEHAVEN BATHS COMPETITION.

SIR,—Messrs. Dyson & Dyson having written you respecting the above, I now forward you the entire correspondence, from which, I think, you will see that I have just cause to complain of the very unfair way in which they have stated the case betwixt us.

I request your attention to the reservation clause in the advertisement, and the following words, in my letter of November 13th, in reply to their suggestion that I should give a guarantee, "*A hitch has arisen respecting the ground, so that I cannot just now give any guarantee.*" My position in the matter is briefly this. As a member of our Harbour Board, I appealed to my colleagues to convey to trustees or a company a piece of (at present) waste ground, about to be enclosed by erection of a sea wall, for the construction thereon of public baths. The idea being favourably received, I forwarded to you an advertisement asking for designs, &c. This appeared in your issue of October 26th. Immediately after publication, Messrs. Dyson & Dyson, with about thirty others, applied for tracing of ground, &c. The date for receiving designs (originally intended for November 18th) was inadvertently omitted. This being communicated by letter, Messrs. Dyson said it was too limited; it was accordingly extended to the end of the month. At the first meeting of our Board (November 11) the application for ground was complied with, but subject to confirmation or otherwise by Mr. Brunlees, the engineer for the dock works in course of construction. At the succeeding meeting (November 25th), the engineer advised the Board that the ground would be required for railway sidings, &c. Messrs. Dyson's plans had been despatched two days previously, and reached me on the morning of the meeting. I communicated the decision of the Board by first post to all the applicants for designs. The above notice crossed some plans in the transit (these, at the senders' request, were immediately returned), and prevented others from being sent. There not having been any competition, and Messrs. Dyson not having any instructions from me, I much doubt whether they have any claim.

Regarding the merits of their designs, which I forward along with this, I leave you to judge whether, as for work done, the sum offered is not sufficient; and whether the proposed mode of settlement has anything of the nature of a "swindle" about it. . . .

JOHN JACKSON.

*** Mr. Jackson appears to have acted with good intentions, and he evidently feels, judging from the offer he has made, that he had no right by certain offers to induce architects to expend time and thought in the preparation of designs, and then when work had been done to withdraw his offers. A moral claim against him certainly exists. What the power of enforcing it may be we will not discuss. Moreover, we feel bound to say (Messrs. Dyson & Dyson continuing to press us for an opinion) that their design for the exterior of the building, as sent to us by Mr. Johnson, is of such a character that no competent judge could have selected it for execution.

POSTAL TELEGRAMS.

SIR,—It is now generally admitted that it is very desirable receipts should be given for telegrams. I have no doubt the reason of the Telegraph Department refusing to give receipts for telegrams is, that it would consume a quantity of paper, and give too much employment to the clerks; but if I may be permitted to offer a few suggestions, I think it could be carried out in this way:—

The counter or receiving clerk should be provided with a rack of small tickets similar to railway tickets, and in the same form, having consecutive numbers, and of various values from one shilling.

A railway date stamp placed on the counter.

These tickets (receipts for telegrams) could be drawn, stamped, and issued to the senders of messages with almost electrical speed.

In cases where it is necessary to produce a copy of a telegram,—if it is after twelve months the Telegraph Department destroys them; and as the production of telegrams would often prove a case, it is an important item to men of business. The following suggestion would avoid this:—

Senders of telegrams should be supplied, either at the telegraph station or for use at their places of business, with books containing postal telegraph forms, with duplicate forms for copies, similar to those which the various telegraph companies supplied to merchants and others, and by the use of carbonic paper copies could be retained.

These copies should be handed, with the original (for transmission), to the receiving clerk, who should affix the date and office stamp upon the copy.

ARTHUR G. NEWTON.

THE RECENT FALL IN BRISTOL.

SIR,—With reference to the paragraph in your paper of the 4th inst., on the disaster which lately occurred at our building, opposite the Railway Terminus, Bristol, we shall be obliged if you will allow us to say, the weight of the roof, which is not at all disproportioned to the supporting pillars, was not the cause of the accident, nor are the portions of the roof remaining in a bad state; so far from their having to come down, they will not require anything to be done to them. The cause of the fall of the roof was the giving way of the foundation of one of the interior pillars, owing to an old tank, which had been long unused and forgotten, existing near it: the tank wall gave way, and the foundation slid into it; and the support being withdrawn, of course the flat roof above and the intervening stories fell to the ground.

The side walls stood the strain of the falling interior without displacement, and the ends of the iron tie-rods, which ran through the building, were even wrenched through them by the falling beams, without causing more damage than the disturbance of the few bricks immediately round them. BROCK & BRUCE.

BELLS.

SIR,—With respect to your remarks about bells, there are two reasons why bells sound best when they are swung. One is, that the mouth of the bell is turned in the direction in which the sound is intended to travel, and another that the centrifugal force throws out the sound. By securing the bell horizontally with a screw-bolt through the head, the first difficulty might be overcome. The second point appears of less importance, but I cannot imagine that a bell would ever sound well with its mouth opposite the floor of the belfry. A. J. BAKER.

DIFFERENCES AT OSWESTRY.

WITH reference to the restoration of the ancient church of Oswestry, now going on under the direction of Mr. Street, a stormy meeting has been held, some of the inhabitants maintaining that the architect desired to make the building as much like a Roman Catholic chapel as possible, others expressing perfect satisfaction. It was ultimately resolved unanimously, amongst other things, that there should be no iron gates and railings to separate the chancel from the nave.

THE OLD MANSION HOUSE AT ENFIELD.

SIR,—I cordially endorse the views you have pronounced in favour of the conservation of this interesting building, *temp.* Queen Anne. What is its early history? Forty years ago I received my early education in it, when, and for some time before, it was well known as a large private school, presided over by an energetic, estimable man, named Hainsworth, who was one of the first to establish the principle of teaching by "firmness and kindness," and with whom "tunding," rods, and birches were unknown. I have a lively recollection of its architectural beauties when trying often to sketch it as a boy; and on revisiting it some years later, when I discovered it to be converted into a most inconvenient railway station, I, too, became impressed with the peculiarities you note. In addition to the ornamental brick entrance porch,—which, by the way, from facing the north, was in excellent preservation,—its internal arrangements and "planning" were admirable. The western façade had a wing of kitchen and servants' offices attached, which, together, formed one side of a large court-yard, the eastern side of which was occupied by a range of buildings which were at my time used as schoolrooms. The northern front was close to a public road, on the other side of which flowed the river Lea. The sunny southern side was occupied by a spacious lawn with forest trees, beyond which was a splendid orchard and garden, in the centre of which was a large and well-stocked ornamental fish-pond, which provided also excellent skating in winter. On the eastern side were paddocks, where cricket and other sports were held. A mansion so completely planned in itself, and in reference to the amusements of fishing, boating, skating, cricketing, &c., so admirably arranged within its own grounds, must have been founded by some one of no mean importance. Who was the founder of it, and who the architect? F. R. WILSON.

SANITARY SONGS.

SIR,—The Ladies' Association of which I am a member desire to thank you for the sanitary song or hymn lately printed in the *Builder* (vol. xxx., p. 1022). It only needs, we think, another stanza or two (somewhat of the following character) to make it perfect, an iliad in a nut-shell, so to speak, "on the evils that are wrought" by ignorance and neglect, and the "good that is sought" from the establishment and due observance of true sanitary principles. Such simple rhymes would, as I once before suggested, do immense good if printed in the form of cards, and circulated among the children at all Sabbath and secular schools.

This stanza (a humble imitation, of course, which, it is hoped, will not be considered presumptuous) should follow the line in the original (verse 2),—

> "Where plague creeps on by stealth."
>
> "Shall we have putrid beef in the pot,
> Potatoes diseased and dear,
> Or mouldering bread, or fish to rot;
> Or milk made of whiting and 'Simpson' hot,
> Or *cocculus indicus'd* beer?"

These adulterations, properly speaking, belong now to the public analyst; but your readers will doubtless remember that the whole subject was thoroughly and continuously exposed in the *Builder* long before a public analyst was hoped for. PRISCILLA.

HOLY TRINITY SCHOOLS, SYDENHAM.

THE plans of Messrs. John Giles & Gough, of Craven-street, have been selected in a limited competition, for the above schools. They are intended to provide for 100 boys, 100 girls, and 150 infants.

ORNAMENTATION OF A NEW RECREATION GROUND IN BETHNAL GREEN.

IN carrying out the several alterations on the Columbia Market estate, purchased by Lady Burdett Coutts for the purpose of making public improvements in the neighbourhood, the Baroness cleared a triangular piece of land at the corner of Crab Tree-row and Hackney-road, on which stood a number of dilapidated houses, and formed the area into an open space for the benefit of the tenants of the Improved Industrial Dwellings, and other buildings in the locality. The Baroness is now about to plant this open space with trees, and also to place circular seats around them for the two-fold purpose of protecting the trees, and also to be of use to the public in fine weather. In addition to the trees and the seats a number of "rests," similar to that in Piccadilly, nearly opposite the end of Down-street, are also to be erected, after which it is the intention of the Baroness to have the land legally made over to the Bethnal-green vestry, so that the same may be preserved as a free and open space for ever for the benefit of the inhabitants.

THE IMPROVEMENT OF SMALL HOUSES.

THE thought has occurred to me that the very numerous class of persons with small and fixed incomes, whom the Chancellor of the Exchequer delights more especially to honour, and whom the general rise in the means of living has put somewhat in a dilemma at this crucial period of the year, might be profitably aided by a little ingenuity exercised in the direction of a more economic arrangement of their dwellings and the more general adoption of domestic labour-saving appliances, and thus be made as comfortable as when, by the neglect of these matters, they are constrained to devote a margin of their income to unprofitable labour. It is true we cannot have Australian villas packed in tins and imported to compete with our speculating builders;

but the object sought after might be gained by reconsidering the arrangement of our own produce. These villas are by no means healthy, unless it be contended that living underground is healthy, as their inhabitants mostly do, viz., in the breakfast-parlour! next the kitchen, where drains are generally defective, and "damp" chronic,—as a sequence, ill health, and this means expense. I heard lately of a man discovering a half-filled well under his floor. "All's well that ends well," doubtless quoth the builder, as he laid the last board that hid his infernal pit. Could not the kitchen be put nearer the bed-rooms, so as to have this office handy for the supervision of the children on that floor? For if a man is to be honoured who makes two blades of grass grow where erst has grown but one, how much more shall he be honoured who makes one servant do where two have done before.

Now, as to the servants' work, there is dirty work and there is clean work. It is in the former of these more especially that I think a saving is to be effected, as it includes cooking, cleaning stoves, passages, and generally "tidying up." Clean work consists, *inter alia*, of making beds, waiting at table, attending the door, crochet, reading the newspapers and penny dreadfuls; these latter occupations are a *sine qud non* in this our day, and must consequently form a factor in our calculations; pianoforte playing (too often a nuisance to neighbours) and subscription to Mudie's are mere accessories of ornamental service, and do not come within our category of necessary. The general adoption of tile hearths and backs and movable grates would save trouble. Then there is a host of capital domestic labour-saving machines,—cleanly closed kitchen-ranges, gas for summer, and more water-taps should be about the place, and the surplus heat from the boiler capable of being utilised when wanted. Then the long flight of stone steps to the front door should be improved away; these occupy much time in keeping trim (particularly if the maid "takes a pride in them," and a pleasure in a comprehensive and contemplative view of the neighbourhood from their summit),—a proceeding, however exhilarating in itself, wasteful of time and adding no dignity to the front of the house.

Giant intellects may consider the solution of this problem beneath their notice, but I submit this intellect, *pace* the elephant's trunk, should be able to pick up the pin of economy as well as root up a tree to let in the light and air of knowledge. I know I have tried to reconcile the conflicting claims in these microcosms of houses, and have found designing large houses child's play in comparison.

JOSEPH IVIMEY.

CHURCH-BUILDING NEWS.

Woodhouse (Leeds). — St. Mark's Church, Woodhouse, which has lately been closed, has undergone considerable alterations. The ground-floor has been entirely replanned, the old high-backed pews having been replaced with open deal benches, having solid cut pitch-pine ends. The backs are framed and panelled, with moulded top-rail. The seat-boards are made to slope, as also the backs. A spacious chancel has been formed by raising the floor of the two easternmost bays, and filling in between the columns with wooden screens, the lower part of which is panelled, the upper portion being open framework, with sunk, pierced, and cusped tracery-head, resting on turned shafting. The choir seats are open benches in pitch-pine, with ornamental solid cut ends. The fronts of the boys' seats are of open framework, with cusped heads. The wood flooring under all the seating is raised above the level of the floor of the passages, and means have been used to secure perfect ventilation, as it was found on removing the old floor-boards that the joisting, for want of ventilation, was in many places thoroughly decayed, and could not have lasted much longer. The floor of the chancel and within the altar-rail (or sacrarium) is laid with tiling. The steps to the altar are of white Sicilian marble, with red marble risers. The seating has been stained and varnished. The walls and roofs have been cleaned down, and painted in oil colour. The roofs of the nave and aisles are finished with a bluish-grey tint, and have ornamental patterns stencilled on them. The walls are finished with a buff colour, with a dado of green, having patterns stencilled on. The reveals to the windows are painted in red, with ivy-leaf running round. The walls and roof of the chancel are treated much more richly, the roof having the spandrels filled in with the pomegranate and vine, and angels represented as singing. The east wall has been decorated so as to harmonise with the chancel window (which represents the Ascension), and has angels playing upon various instruments of music, with the text, "God is gone up with a shout, the Lord with the sound of a trumpet" (Psalm xlvii. 5) running across. The reredos is divided into three panels, each containing a picture, in oil colours, the three symbolising the three dispensations, viz., the patriarchal, the Mosaic, and the Christian. The centre picture represents our Lord, as Christian high priest, blessing the holy sacrament; the left hand represents Abraham and son Isaac on their way to Mount Moriah, a type of the willing sacrifice of Christ (Genesis xxii.); the right panel represents Moses lifting up the brazen serpent in the wilderness, a type of the salvation of the Cross (St. John iii. 14, 15). The panels to the left of the reredos will shortly be filled in with subjects, one representing the miracle of the Changing of Water into Wine; the other, the parable of the Wedding Garment. The panels to the right will represent the miracle of the Feeding of the Five Thousand, and the parable of the Ten Virgins. The panels beneath these have the passion-flower stencilled upon a chocolate-coloured ground. The chancel-screens have been decorated in colours. The organ has been repaired and embellished, the pipes being cleaned and decorated with gold and coloured patterns. A new oak pulpit and altar have also been supplied (the wood of the pulpit being more than 500 years old), the gallery-front and organ-case have been regrained, and the seating in the gallery repainted in plain colours. The whole of the decorations have been carried out by Messrs. Powell Brothers, of Park-place, Leeds, under the direction of the architects. The contractors for the wood seating are Messrs. Shires & Son, of Leeds. The pulpit and chancel-screen are the workmanship of Mr. James Wood, of Leeds. The graining and varnishing of the woodwork, and the plain painting of the walls, roofs, and gallery seats, have been done by Messrs. Fred. Jackson & Co., Leeds. The whole of the work, with the exception of the pulpit, altar, and graining, has been carried out under the superintendence of Messrs. Adams & Kelly, architects, Leeds. Gifts have been made to the church by different members of the congregation. Simultaneously with the work of restoration, a new stained-glass window, by Messrs. Clayton & Bell, has been placed in the north aisle by Mr. Thos. Tennant, to the memory of his late wife, who was for many years a communicant and generous benefactor of St. Mark's. The three lights of the window have been subdivided, so as to admit of the treatment in them of six corporal works of mercy. The three upper subjects represent respectively, "The Feeding of the Hungry," "The Clothing of the Naked," and "The Giving of Drink to the Thirsty;" while in the lower are depicted, "The Ministering to Prisoners and Captives," "The Receiving and Entertaining of Strangers," and "The Ministering to the Sick and Dying."

Wellingborough.—The new school church at Wellingborough, which has been dedicated to St. Barnabas the Apostle, has been opened for divine worship: it is an iron construction, in the Gothic style of architecture, very similar to that recently erected on the Lower Mounts, at Northampton, only that it is somewhat larger. The edifice is situated in Oxford-street, off the Wilby-road, just outside the outskirts of the old town, on the borders of the new, and in the midst of a fast-increasing neighbourhood. Its dimensions are these:—On the ground-floor, length, not including the chancel, 54 ft., width 32 ft.; entrance-porch, 10 ft. by 6 ft. The chancel is 24 ft. wide, 16 ft. long. It is divided from the main part of the church by a Gothic arch, and on the south side there is a smaller Gothic arch opening into the vestry. The vestry is 15 ft. by 16 ft. The height to the ridge of the main building is 30 ft., and to the top of the small spire, 48 ft. The spire includes a small belfry. The church is lighted with four small Gothic windows on either side, and at the east end there is a large circular window, filled in with glazed glass of cathedral green, and relieved by a centre colouring, illuminating the sacred monogram, I.H.S. Artificially it is lighted by gas-stand pendants, in the body of the church, and a couple of ornamental and many-lighted gas-standards in the chancel. It is panelled with burnished timber throughout, and is seated, with the exception of the choir-seats in the chancel, with cathedral chairs. It will seat about 350 persons, and afford accommodation for school purposes, according to the Government requirements, for more than 220 children. It was built by Messrs. Kent, of London; Mr. Bold, Wellingborough, having executed the foundation brickwork. The cost of the land, which measures 856 square yards, was 139*l.* 10*s.*, and that of the erection more than 500*l.* in addition.

SCHOOL-BUILDING NEWS.

Garford and Frilford.—A new school for the parishes of Garford and Frilford is to be built immediately from the designs of Mr. Edwin Dolby, of Abingdon, architect. The plans will comprise school-room, class-room, and a teachers' residence, with separate offices for the boys and girls, and a private enclosed yard attached to the teacher's house. The local stone will be used for the walls, and the windows will be of Bath stone, fitted with Messrs. Burt & Potts's iron lights. The roof of the school and class-room will be partially exposed to view. The contract of Mr. R. F. Bryan, of Abingdon, has been accepted, and he is to commence forthwith.

Horton Kirby.—The Bradford School for Little Boys, situated in the parish of Horton Kirby, Kent, near the Farningham-road Station of the London, Chatham, and Dover Railway, has been opened, with some ceremony, by the Mayor of Bradford, Mr. M. W. Thompson. The "Home,"—with which the school is to be connected,—is intended for boys under ten years of age who are either homeless or destitute, or in danger of falling into crime. It consists of ten houses, and the building erected by the Bradford people is to be used as a school. Thirty boys reside in each of the houses, under the care of a man and his wife, as the "father" and "mother" of the family. While the Home provides accommodation for 300 homeless boys, it feeds and clothes them, and gives them a secular and religious education. The boys are then sent to the various trades which they most prefer; and when they are sent out to the world, they are looked after as "old boys"; and if they behave for a certain length of time, they receive prizes. The foundation-stone of the new school was laid on the 13th of July last, with great ceremony, by Lord Frederick C. Cavendish, M.P. On that occasion the Prince Imperial of France presented the prizes to the boys, among whom were a number of "old boys." The new building consists of a main room, 26 ft. by 30 ft., an infant-room, 18 ft. by 19 ft., and three separate class-rooms of proportionate dimensions. In the rear of the building is a covered playground. All the external walls are built of Kentish rag, surmounted with an ornamental slate roof. The cost of the building is about 1,600*l.*, and upwards of 1,000*l.* have been subscribed in Bradford. Amongst the donors were Sir T. Salt and Mr. Geo. Salt, 100*l.* each.

Cheadle.—The new church schools at Whiston have been opened. The schools cost in their erection upwards of 600*l.*

Brighton.—The new schools which have been erected in Mount-street, in connexion with St. Mary's Chapel, as a memorial of the Rev. Julius M. Elliott, the late incumbent, have been formally opened by the Bishop of the Diocese. Mr. Elliott lost his life in 1869, whilst descending the Matterhorn. Just prior to his death, says the local *Herald*, he had conceived a scheme for supplying a want greatly felt in the district in which St. Mary's Chapel is situated, viz., of a school on the principles of the Church of England. The congregation resolved to carry it out as the best memorial they could erect to the memory of their pastor. The "Elliott Memorial Schools" were, therefore, raised, at a cost of 2,612*l.*, towards which the Misses Elliott gave 1,000*l.* The schools, which are capable of giving accommodation to 132 boys and 200 girls, are to be worked in connexion with the Branch Central National Schools in Warwick-street, which have also been repaired and altered at an expense of 300*l.* The buildings are well adapted for a school of this character; the ground-floor being, as usual, appropriated for the boys, and the first-floor for the girls, with a separate playground for each sex. The external walls, which are built hollow, are faced with Suffolk white bricks, with string courses and arches of red kiln and blue Staffordshire brick. The copings and keystones are of Bath stone; the roofs being covered with Broomhall tiles; and the buildings are plastered internally with Scott's

cement. Sufficient ventilation has been secured by means of open fireplaces fitted with "Abbotsford" stoves, the windows being provided with hung sashes, and ventilators are placed in the floors and ceilings. Mr. John C. Gibbins (Goulty & Gibbins, London and Brighton), was the architect; and Mr. Albert Baker, of Brighton, the contractor.

Books Received.

The Drainage and Sewerage of Bombay: being a Report submitted to the Bench of Justices of that City. By their Executive Engineer, HECTOR TULLOCH, Major, Royal Engineers. London: Printed by W. J. Johnson, 21, Fleet-street. 1872.

MAJOR TULLOCH, whose report on the water-supply of Bombay we recently noticed, has also reported, as we here see, on its drainage and sewerage. He reviews all the various schemes heretofore projected, and proposes a new one of his own for the complete sewerage and drainage of the whole island of Bombay at once as by far the most advisable. The island, he says, can be drained on his project without the aid of any new underground channel, and simply by enlarging the present sluices, so that the whole of its sewage can be removed by one single main sewer of moderate size, and can be pumped at one spot. It thus does not matter, as regards the drainage, in what direction the town spreads, as the drainage of each new district can be delivered into the one main sewer by gravitation. The major does not propose to pump the sewage into the sea, but to utilise it, and after utilisation, and when it is pure, to discharge it into the creek north of Trombay, at a point seven miles from Bombay, where there is no large village.

A Digest of the Statutes relating to the Public Health; for the Use of Members of Urban Sanitary Authorities. By GEORGE F. CHAMBERS, F.R.A.S., Barrister-at-Law. Stevens & Co. 1872.

THIS is a comprehensive and popular digest of all the fifty Acts of Parliament and more with which urban sanitary authorities have to deal. Codification is sadly wanting. This Digest treats of Urban Districts only; Rural Districts being reserved for a future publication.

VARIORUM.

IN a paper "On the Utilisation of Waste Coal," by Mr. W. H. Wahl, in the "Journal of the Franklin Institute of Pennsylvania," edited by Mr. Wahl, Ph.D., and others, the author says:—

"The processes for the utilisation of the anthracite waste consist universally in the employment of a foreign material or materials, which shall serve the purpose of a cement to bind the loose particles of the waste together. The cements heretofore used have been both of mineral (incombustible) and of organic (combustible) character. In the majority of instances, as is usually the case with a field of invention just ripening into importance, the patentees of such processes display a characteristic ignorance of, or lofty indifference to, the conditions of the problem they profess to solve. The number and variety of substances which have been secured by inventors, either as cements, or to aid in the cementation or combustion, is well calculated to surprise one unfamiliar with the literature,—if such an expression is allowable when applied to Patent Office records,—of the subject. The several alkaline substances and their silicates seem to have been held in special favour, since they repeat themselves, with some modifications in several places. Lime, either alone or with some subsequent chemical alteration into carbonate, sulphate, or silicate, is claimed; or plaster of Paris or hydraulic cement is used directly. Clay must also be named. Among organic substances may be named pitch, coal-tar, resin, the Trinidad bitumens, asphalte, petroleum residues, dextrine, glue, Grahamite, &c.; while as accessories, employed either to assist cementation or combustion, we have sawdust, chaff, flour, blood, cow-dung, starch, sand, saltpetre, and other substances too numerous to mention. Comparatively few of these processes have ever reached a public trial, as, indeed, few deserve it, and of those which have received attention, none have been more than indifferently successful, either from inherent deficiencies or from commercial reasons."

——*Journal of the Society of Telegraph Engineers.* Edited by Major Frank Bolton, hon. sec., and G. E. Preece, sec. London: Spon. No. 2, Vol. I. This new journal must tend greatly to promote telegraphic progress. The number under notice contains some valuable original communications and reports on telegraphy and electrical science. The journal is published under the supervision of an editing committee.——With the *Gardener's Chronicle* has been issued a characteristic and very fairly executed Almanac, for suspension. The *Chronicle* continues its career with credit to itself and satisfaction to its subscribers.

Miscellanea.

Telegraph Amalgamation.—We learn from *Abbott's Monthly Circular* that the preliminary arrangements for the amalgamation of the telegraph lines east of Bombay are now under consideration, and it is gratifying to hear that the representatives from the various colonies in Australia are about to meet in Sydney to fix upon the amount of subsidy to be paid in exchange for a reduction of tariff, thus showing that the colonies are quite alive to the importance of cheap telegraphy, and are prepared to make large sacrifices to obtain it. At the present time the impression, to some extent, prevails, and the question is being actively ventilated, that cheap telegraphy can be brought about by competing lines. Never was there a greater fallacy, and I take this opportunity of warning those who have hitherto done well in their investments to shun proposals having no other justification than mere competition. Attempts at competition draw prominent attention to the great fact that the directors of existing lines must not delay their arrangements for an amalgamation of all submarine cable companies under one great organisation. By this means expenses can be reduced to a minimum, and innumerable other advantages would be attained. At present, without the Boards of any new scheme, there are no less than thirty-four directors on the lines now working, which practically form but one system of communication between East and West,—or, in other words, there is one director for every 298,900*l.* of capital, and no less than eleven of the directors are receiving either double, triple, or quadruple fees by being on separate boards.

Thunderstorms.—Lightning has done much damage in various parts of the country during this strange winter. At Birmingham much damage was done by it. A house in Newhall-street had its roof considerably damaged. A pile of buildings at Perry Barr was partially demolished. Some windows of a building at Oldbury were forced out by the lightning. The storm was also severely felt in Derbyshire. Telegraph-wires were rent and torn asunder. The spire of Newbold Church was struck by lightning, and seriously damaged, so that it was not considered safe. At the time the church was injured, a man engaged in digging a grave in the churchyard was also struck by the lightning, and knocked down in the grave, where he lay stunned for several minutes. At Nottingham two houses were struck and seriously damaged. The electric current struck a stack of chimneys, which it almost entirely demolished, and passed thence to the ground-floor, tearing away the fire-grates of the third-story bedroom and parlours of both houses. A church at Aughton, about a mile from Ormskirk, Lancashire, was struck and damaged. All the windows in the tower were broken and scattered, and a large stone in the base was driven out of the wall. Intelligence has reached Kinsale that the electric force had struck part of the lighthouse on the Old Head, carrying away the lower flooring, the door and window frames, and occasioning other material injury, which has rendered the building rather unsafe. The Trinity Board has sent over an engineer to examine the structure.

Widdrington Church.—Reverberations from the poem of "Chevy Chase," says Mr. Wilson in his "Churches of Lindisfarne," will come into the minds of most persons who hear of Widdrington parish for the first time. Nor will the first sight of the church dispel them. It is a relic of fourteenth-century workmanship, fraught with an air of venerable grace, delicacy, and serenity that is full of charm. It has, however, been much abused by monstrous churchwardenisms; notably the removal of a north aisle, which, leaving no supports, has brought the arches of the fabric all awry. To remedy these defects and to supply additional accommodation for the increasing population of the parish, the church is about to be thoroughly restored and enlarged under the auspices of the vicar, the Rev. R. Firth, M.A.; Lord Vernon, the late owner; and Mr. Hugh Taylor, the present possessor of the Wriddington Estate, have both subscribed largely to the work, with which Mr. F. R. Wilson, architect, is entrusted.

Extraordinary Accident at Bolton.—By the bursting of a fly-wheel, at the Bolton Iron and Steel Works, in Black Horse-street, Bolton, one man has been killed, several injured, and great damage done to property.

Gorleston Church, Great Yarmouth.—Mr. Stuart C. Blake, in his new issue of the "Yarmouth Annual," says:—"In the splays of the two north windows in the north chancel chapel, paintings of angels embowered in the foliage and fruit of the vine were discovered. There were three angels in a splay, hence in the four splays more or less of twelve angels were uncovered upon the walls: around the windows many other angels were found. That portion of the north arcade forming the south side of the north chancel chapel was also found to be painted with figures and floral designs, gracefully extending over and fringing each arch. Traces of paintings were discovered on the east wall of the chancel; on the walls of the south chancel chapel (Bacon's chapel), and the west wall of the south aisle near the belfry-stair door. In the nave, remains of paintings and coloured decorations were discovered. Each pillar had been decorated with various colours,—red, black, and brown being most abundant. Many ancient marble sepulchral slabs were found in the floor, where, with their sepulchral surfaces beneath, they had formed part of the pavement. It is very probable that most of them were originally placed in St. Nicholas's, the conventual church of the Augustine Friars, whose house or convent stood in Fen-street, where some of its ruins may still be seen."

Fever Department at South Staffordshire Hospital.—Extensive alterations and additions made to the South Staffordshire Hospital, in Wolverhampton, are consummated by the opening of the fever department. The original building, erected about 1848, was on the corridor plan. The recent alterations and additions consist of the removal of the out-patient department to a new wing, one story in height, on the eastern side, with a separate approach from the Cleveland-road, thus removing it entirely from the infirmary portion of the hospital. The extension of the south-western wing forms two spacious wards. A further addition is the extension of the south-eastern wing for infectious cases, and arranged for six separate wards. The nurses' rooms are now so divided that each nurse has her separate sleeping-room or cubicle. The light and ventilation to the wards have been increased, as also the cubic space to each patient. The building has been heated, and the water-supply and service for hot water in baths, &c., have been entirely re-arranged. The floors of the new buildings are of oak, and the walls plastered with Parian cement. The builder's work has been well carried out by Mr. Horsman, builder, Wolverhampton, at a cost of over 13,000*l.*, from the designs and under the superintendence of Mr. George Bidlake (Bidlake & Fleeming), architect, Wolverhampton. The heating was contracted for by Mr. Blakemore, of Wednesbury.

Bedford Irrigation Farm.—Mr. J. C. Morton's report on the Bedford Sewage Farm is now in the hands of each member of the corporation, and on perusing it, says the *Bedford Times*, we find that it is an exhaustive and thoroughly scientific document. Premising that, as the farm is capable of cleansing the fecal waste of more than 100,000 persons, there is not a chance of the drainage water creating or becoming a nuisance, Mr. Morton devotes his attention exclusively to the subject of farm profits; and he states that, considering the perfect fitness of the farm for the use of sewage, and its fortunate situation, the land must here pay, if ever land will pay, for the cost of pumping the sewage applied to it. Taking the rent, taxes, and cost of pumping, a total of some 1,360*l.*, the rent and manure per acre reach about 7*l.* 10*s.*, and he considers that this for the annual cost of such land is not beyond the amount at which it is possible to make a market-garden pay, especially as the soil is good, deep, easily worked, and well suited for such crops as sewage irrigation is especially capable of benefiting.

Carr and Barlow's Patent Electric Distance Signal Apparatus for Railways.—By this invention electric communication is established between the signal station and a train in motion, and the signal is exhibited on the engine immediately in front of the driver. The apparatus is said to be less complicated than that now in use, and no circumstance of thick weather can prevent the signal being seen and known by the driver. Arrangements have been made with Messrs. Siemens, Brothers, the electricians, for the construction of the requisite apparatus.

American Antiquities.—Reports concur in declaring that in remote parts of Arizona there exist well-preserved and extensive ruins, which are assumed to be those of once populous cities. Colonel Roberts's city covers about three square miles. It is surrounded by a wall of sandstone, "neatly quarried and dressed," 10 ft. or 12 ft. thick, and originally,—judging from the *talas*,—15 ft. or 20 ft. high. Within are the walls of houses, temples, and markets, all of solid stone, and showing excellent masonry. These walls bear numerous hieroglyphics, cut deeply into the stone. The whole of the ruins, like most of those of the Orient, and more especially those of Arabia and Assyria, are more or less buried in sand. According to the account, this city is some 90 miles from the boundary between Utah and Arizona, and an equal distance from the Western Colorado line. It proves to be close to the desert, and, in truth, environed by extensive sandy plans. This accounts for the lateness of modern discoveries, since neither Indians nor whites would be likely, under ordinary circumstances, to penetrate such desolate wilds.

Restoration of Warwick Castle. — Considerable progress has been made during the past year in rebuilding the private apartments and baronial hall of Warwick Castle, which were destroyed by the disastrous fire at the close of 1871. The external walls have been repaired, the partition walls of the domestic apartments completed, and the work of internal decoration will shortly be commenced. The baronial hall is also progressing satisfactorily; but the workmen have only just begun upon the dining-room and entrance-hall. Amid the rubbish carted away from the ruins of the hall many relics of the curious armour which adorned its walls have been discovered. It is believed that nearly the whole of the steel armour can be restored. Mr. Syers is now engaged on the work. The state apartments, from which the furniture and treasures of painting and sculpture were hurriedly removed, now bear only slight traces .of injury or of hurt.

Co-operation.—Mr. E. O. Greening has been lecturing at the rooms of the Social Science Association on "Co-operation"; Mr. E. V. Neale in the chair. After reviewing the history of the movement and referring to the recent attack made upon it, he said that co-operative societies were yearly increasing in numbers, and, of course, in members: they were fast gaining in solidity and strength. Their growth was even more remarkable, the subscribed capital exceeding 2,750,000*l*., and the business being more than 12,000,000*l*. a year. In England and Scotland alone there were upwards of 400,000 registered members. Although the societies were increasing in material prosperity, he thought he saw a short time back a decline in the number of co-operators; but he was glad to state that lately there had been a remarkable revival in the movement.

The Corinium Museum.—The interesting collection of Roman antiquities found in this ancient Roman town, has been enriched by a donation of an important sepulchral memorial. A few years ago three headstones, commemorating ancient Romans, were found at Watermoor. One of these was at once secured by Mr. T. C. Brown, and presented to the Museum. It represented a soldier on horseback spearing a prostrate foe. The second likewise commemorated a mounted soldier in the same attitude. This became the property of the late Sir Samuel R. Meyrick, and passed into the possession of Mr. George Moffatt, who has presented it to the Museum, where it has arrived. The third monument is a memorial of a civilian. This, formerly in the possession of Mr. P. B. Purnell, has been placed in the museum recently established at Gloucester.

The New Drinking Fountain in Park-lane.—Mr. Thorneycroft is engaged on the new ornamental drinking-fountain which is about to be erected at the expense of Mrs. Brown, in Park-lane, and which is being executed under the supervision of her Majesty's Office of Works. The St. George's, Hanover-square, Vestry, having communicated with the Government authorities as to the alleged delay in completing the fountain, have received a letter from the First Commissioner of Works to the effect that from the artistic character of the fountain much time is required to complete it, but that Mr. Thorneycroft is making satisfactory progress with the work.

Ancient English Wall Paintings.—A circular has been issued by the Science and Art Department, South Kensington, in which it is said:—"The Lords of the Committee of Council on Education consider it desirable that the students of the schools of art throughout the United Kingdom should be encouraged to make copies of ancient wall paintings found in churches or other old buildings in the neighbourhood of their respective schools, and decide that prizes of 5*l*., 3*l*., 2*l*., and 1*l*. should be offered for successful copies of such paintings, with the condition that the Department should have the right of purchasing the drawings sent in at prices to be fixed by the inspector-general of art. . . . . The master of a school of art will be at liberty to prepare copies of such wall paintings himself, and to submit them for purchase; but they will be ineligible for prizes. All drawings must be made to scale, and must be within the size of an imperial sheet."

Report on the Liverpool Free Library, Museum, and Art Gallery.—The committee state in their twentieth and last report, that the success of the institution has, on the whole, fully borne out the most sanguine anticipations of the founders. "The career of such an institution," they remark, "steadily pursuing its course of usefulness, presents few incidents of a sensational character to record. Its best eulogium is the fact of its quietly carrying out the objects for which it was established." During the past year, the schools which have been carried on by the corporation for nearly half a century have been handed over to the School Board. The reporting committee has therefore ceased to have any connexion with their management.

Asbestos Steam Packing.—The raw material, says the *Glasgow Herald*, is brought to the manufactory [of the Patent Asbestos Company, in Glasgow] in considerable quantities from different parts of the world. It comes in sacks and bags like chips and blocks of wood, but of a beautiful white colour. Experiments and study have demonstrated to the proprietors the best method of disintegrating and picking apart these chips and blocks and reducing them to a fibrous condition like jute, flax, or cotton. The material once properly opened up, it is, by means of machinery, which is both simple and ingenious, formed into packing of the usual market sizes. We are assured, adds our authority, that the consumers of asbestos packing express themselves in the warmest manner as to its desirable properties and durability.

Two Building Trade Scoundrels.—Two plasterers, named Mills and Tingay, have been committed for trial by the Cambridge County magistrates, for a violent outrage upon Mr. Richardson, foreman of some building works at Cambridge, where the defendants were employed. In consequence of some insubordination, the two men were reprimanded. They threatened to throw the foreman out of the window, and they were then discharged for their misconduct. The men subsequently waylaid Richardson on the county side of the River Cam, and assaulted him in a very violent manner, so that he was fearfully bruised and injured. For eight days he was in a dangerous state, and it is feared he will not get over an injury to his eyes. His ribs were also broken. The magistrates refused bail.

The Fall of a Church in America.—The *New York Herald* gives an account of a fatal accident at Williamsport, Pennsylvania, on the 25th of December, at the Sabbath school attached to the Baptist church at Newberry. A peculiar shake and quivering of timbers was felt, and the floor gave way, precipitating a whole assemblage into the cellar below. To add to the horror, the oil of the lamps of the edifice ignited and bade fair to destroy all in a general conflagration. The church was on fire, but providentially the flames could be reached and were speedily extinguished. Before the floor gave way many of those within were able to reach the windows and leaped to the ground, a distance of 15 ft. In the panic fifteen people were killed and fifty wounded.

Cemetery for Hampstead.—The Vestry of Hampstead have resolved,—"That a public cemetery is greatly needed in this parish, and that it is desirable that the vestry should consider the best means by which this pressing want may be met." A committee was also appointed to inquire into and report upon the subject.

Utilising the Great Ormes Head.—The boldest headland on the North Welsh coast, bleak and sterile, but forming a welcome shelter to one of the prettiest bays and the most popular watering-places in Wales,—Llandudno,—has been taken in hand by a limited liability company. There is no known mineral wealth, but its surface is available for enterprise, and so a carriage drive is to be constructed round the headland, and pleasure-gardens, with a pavilion, music-hall, conservatories, &c., are to be constructed on the available spaces. The estimated cost of the road is 11,500*l*.; and a further sum of 7,000*l*. will, it is calculated, supply all the other features necessary to convert the bluff promontory into a resort second only to the famous hanging gardens of ancient Babylon in novelty and interest.

Economising Fuel and Preventing Smoke. Mr. Joseph Knott, of the firm of Knott & Co., steel manufacturers, of the Highfield Steel Works, has patented an invention for economising fuel and preventing smoke. The patent consists of bringing together two atmospheric pressures which meet in the fire, and create, it is said, a perfect combustion. The patent has been inspected by the mayors of Sheffield and Rotherham, Sir John Brown, Messrs. Brown & Bayley (of the firm of Brown, Bayley, & Dixon), Mr. Bardwell, Mr. Unwin, and Mr. Habershon, jun. They are said to have expressed themselves satisfied with the experiment, and thought that if it would answer as well when applied to a large boiler as in the present instance, it would prove of immense advantage.

The Price of Gas for the Public Lamps. The Metropolitan Board have had under consideration the question of the large price of the gas supplied to the public lamps, and the intention of the companies to increase the cost. The matter has been referred to the Works Committee, with a view to Parliamentary interference in behalf of the consumers, and full time too. The gas companies used to maintain that the price of coal was always a minor consideration as regarded the actual price of gas: that is what they said when coal was cheap; why should it be otherwise now, especially with such rubbishing gas as they but too generally now give? Compared with its dingy, watery, yellow hue, paraffine is like solar brilliancy itself.

Air-Gas Apparatus.—An improved form of apparatus for air-gas is described in the *Notts Guardian*:—"The apparatus for making the gas consists of a meter-like construction, 3½ ft. high, and perhaps 2 ft. across, and it consists of three chambers. Into one of these chambers is poured benzoline or petroleum, or any species of hydrocarbon gas. Whilst the benzoline or hydrocarbon is in this chamber, a fan which is placed in an adjoining chamber (No. 2 chamber we may call it), is so worked by weights and a pulley outside, that the atmospheric air mixes with it, and this having passed into a third compartment filled with sponges forms the lighting gas, which can be at once drawn off in pipes, and used in any quantity."

The Trades' Congress at Leeds.—The fifth annual assembly of the trades of Great Britain, through their representatives, has been opened in the Assembly-rooms, Cookridge-street, when there was a more numerous attendance of delegates than at Nottingham last year. After the verification of the credentials of the delegates, and other formal business, Mr. Lishman was elected president unanimously. He reserved his inaugural remarks until next day, in order that the report of the Parliamentary Committee might be received. Mr. Howell then read the Parliamentary Committee's report, which has since been under discussion.

The Price of Coal.—At a meeting of coal-masters of the Cannock Chase district, held in Birmingham, it has been resolved to raise the price of coal, from 1s. 6d. to 3s. per ton, according to quality. The causes assigned for this advance are the increased activity of demand resulting from the closing of the South Wales collieries, the diminished output due to the inundations, and the additional charges thrown upon coalowners by the Mines' Regulation Act. In East Worcestershire, South Staffordshire, and elsewhere, a similar movement is expected.

Civil and Mechanical Engineers' Society. The next meeting of this society will be on February 7th, there being no meeting this (Friday) evening, as shown on the card.

Re-construction of Weigh-house Chapel. The well-known Weigh-house Chapel, near the Monument, celebrated, for something like half a century, amongst Congregationalists as the scene of the Rev. Dr. Binney's labour, has just been closed, and the interior is about to be entirely reconstructed. The final series, prior to the closing of the edifice for the alterations, took place on Sunday last, when the Rev. Dr. Binney, who retired from the ministry there about two years ago, returned to his pulpit, and preached there for the last time.

Bursting of a Vitriol Chamber at Farnworth.—At Mr. Wilson's, Prestolee Chemical Works, is a mechanics' workshop, and above that was a large vitriol chamber, 150 ft. long, full of vitriol. Suddenly a beam supporting the floor gave way; the floor fell, and the bottom of the chamber burst, releasing all the liquid into the mechanics' shop. The loss of the chamber, vitriol, machinery, tools, and building is estimated to amount to 3,000*l*. Fortunately, no one was working in the place at the time.

Ryde Engineer and Surveyorship.—We understand that Mr. George H. Stayton, C.E., assistant borough engineer of Portsmouth, has been elected to this appointment. There were thirty-nine candidates originally: these were reduced to three, who attended a meeting of the whole council in committee last Monday; the other two gentlemen being Mr. Pollard, town surveyor of Sheerness; and Mr. Boston, of Newcastle-on-Tyne Surveyor's Department.

Houses for Workmen in Paris.—A model *cité industrielle* is now in course of construction between the Faubourg St. Antoine and the Boulevard Voltaire. Nineteen houses are already erected. The tenants are to be provided with gas and water, at rents varying from 6*l*. to 16*l*. per annum. The plan also comprises a number of *ateliers*, with a joint motor of 200 horse-power. In the centre there are baths and washhouses, to be made available at a nominal price.

Dock Accommodation at New Milford.—The long-projected scheme for the construction of docks at New Milford appears at length to have assumed a practical shape, and it is said that preparations are already being made for the commencement of the work at an early date. The chief engineer of the Great Western Railway Company is making arrangements for the immediate commencement of the Great Western Dock.

Leicester-square.—This unfortunate square has been completely enclosed. The posts are about 12 ft. high. It has been said that the square itself will be levelled, asphalte laid down, and the enclosure used as a drill-ground. The hoarding is made an extensive field for advertisements. The greater the nuisance the likelier the remedy. The inhabitants are astir on the subject.

Burning of a New York Theatre.—Descriptions of the total destruction by fire of the Fifth Avenue Theatre, one of the finest in New York, and adjoining the hotel in which the dreadful fire occurred a month ago, are brought by the mail which has arrived at Plymouth. The fire originated by sparks from a defective flue twenty minutes after an audience had been dismissed.

Messrs. Cassell, Petter, & Galpin's Premises, in La Belle Sauvage-yard, are to be extended, and for this purpose they have acquired the greater portion of the ground running round from their back premises alongside the new viaduct railway station, up the south side of Fleet-lane to Prujean-square, in the Old Bailey. Mr. Francis Chambers is the architect.

Retirement of Mr. Cole, C.B.—At the annual distribution of prizes of the Nottingham School of Art, Mr. Cole, C.B., amid expressions of regret, announced his intention, after fifty years of public service, of resigning his post in connexion with the South Kensington Museum. We mentioned this intention some time ago.

The Public Health Act.—It is satisfactory to find the *British Medical Journal* is of opinion that some of the inspectors of the Local Government Board under the Public Health Act should be engineers.

Dr. Williams's New Library.—We are asked to say that Mr. Shillito was the clerk of the works: Mr. March was the contractor's foreman.

Street Improvements in Rome.—An architect and engineer at Rome, Signor Landi, has brought forward a project for constructing a great street through the city, 2½ miles long, and nearly 44 yards wide, to be called the Via Massima. The cost is estimated at 100 millions of francs.

The Proposed New Arboretum at Walsall.—At a meeting of the promoters of this undertaking, it was stated that a sufficient number of shares had now been taken up to justify the directors in commencing the work forthwith.

The Working of the Telegraph.—At the meeting of the Society of Telegraph Engineers on Wednesday week, Mr. Scudamore, of the Post-office, said there were in this country from 10,000 to 15,000 persons engaged daily in the practice of telegraphy, most of them young.

Licensed Victuallers' Asylum. — The annual ball in aid of the funds of the Licensed Victuallers' Asylum, took place at St. James's Hall, on Thursday, the 16th inst., and we believe the executive of this extensive institution were favoured with as numerous a gathering as usual.

Additions to the Caterham Asylum.—At the last meeting of the Metropolitan Asylum Board, the tender of Mr. Henshaw, to erect an additional block of buildings, with recreation-ground attached, at the Caterham Asylum, for the sum of 12,493*l*., was accepted.

Royal Institute of British Architects.—At the next ordinary general meeting of the session to be held on the 20th inst., a paper on "Architecture Practically Considered in Relation to Music," by Mr. H. H. Statham, Associate, will be read.

Public Hall of Unitarians in London.—The Unitarians are about to erect, in a central part of London, a public hall, at a cost of 30,000*l*., towards which subscriptions to the amount of 11,000*l*. have already been received.

Stable Floors.—Messrs. Spiers & Pond have just completed stabling for eighty-six horses, the floors of which are paved with Claridge's Patent Asphalte.

TENDERS

For additional building and recreation-hall to the Metropolitan Asylum for Imbeciles at Caterham, Surrey, for the Metropolitan Asylum Board. Messrs. John Giles & Gough, architects. Quantities by Mr. C. W. Goode:—

Sheffield	£14,980 0 0
Ward	14,589 0 0
Sherbourne	14,100 0 0
Fish	14,100 0 0
Wright, Brothers	13,565 0 0
Mansbridge	13,550 0 0
Bullivant	13,495 0 0
Higgs	13,300 0 0
Rankin	13,170 0 0
Wilson	12,675 0 0
Henshaw (accepted)	12,493 0 0

For new public elementary schools for 1,040 children, at Maidstone-street, Haggerstone, for the School Board for London. Messrs. Mileham & Kennedy, architects. Quantities by Messrs. Pain & Clark:—

Crockett	£7,990 0 0
Browne & Robinson	7,950 0 0
Wagner	7,898 0 0
Carter & Son	7,795 0 0
Oxford & Whillier	7,787 0 0
Scrivener & White	7,752 0 0
Kirk	7,665 0 0
Hooper	7,567 0 0
Pritchard	7,523 0 0
Cooke & Greene	7,504 0 0
Brass	7,440 0 0
Nixon & Son	7,430 0 0
Higgs	7,425 0 0
Henshaw & Co.	7,270 0 0
W. H. & J. Mansbridge	7,193 0 0

For rebuilding 31 and 32, King-street, Westminster. Mr. John Norton, architect. Quantities by Mr. S. J. Thacker:—

	Net amount of contract.	Extra if picked deals or pine.
Lord	£6,700 0 0	£80 0 0
Oldry	6,550 0 0	50 0 0
Tebitt	6,381 0 0	35 0 0
Langmead & Way	6,360 0 0	100 0 0
Staines & Son	6,346 0 0	75 0 0
Bullivant	6,250 0 0	135 0 0
Thompson	6,235 0 0	120 0 0
Aitchinson & Walker	6,225 0 0	200 0 0
Rankin	6,175 0 0	40 0 0
Sawyer	6,163 0 0	50 0 0
Crabb	6,122 0 0	25 0 0
Stevenson	6,069 0 0	100 0 0
Wagnor	5,909 0 0	35 0 0
Hughesden	5,812 0 0	156 0 0
Mansbridge	5,587 0 0	100 0 0
Gough	5,650 0 0	200 0 0
Everall & Co.	5,465 0 0	25 0 0
Blease	5,300 0 0	30 0 0
Carrod	5,273 0 0	75 0 0

For the erection of schools and residence, Forth-end, Great Waltham, Essex. Mr. Frank Whitmore, architect:—

Smith & Holland (accepted)	£930 0 0

For restoration of roof, Marshbury Church, Essex. Mr. Frank Whitmore, architect:—

Dowsett (accepted)	£174 10 0

For new Swinton Dairy, Swinton-street, for Mr. H. Williams. Messrs. Goodchild & Son, architects:—

Perry (accepted)	£1,080 0 0

For additional works at Worcester House, Surrey. Messrs. John Giles & Gough, architects. Quantities by Mr. Goode:—

Jocelyne	£3,529 0 0

For new schools, Winstanley-road, Lambeth, for the London School Board. Mr. E. R. Robson, architect. Quantities by Mr. G. D. Taaffe:—

Tyerman	£6,830 0 0
Sheppard	6,625 0 0
Manley & Rogers	6,500 0 0
Nixon	6,497 0 0
Browne & Robinson	6,495 0 0
Carter & Sons	6,472 0 0
Newman & Mann	6,470 0 0
Enor	6,364 0 0
Parsons	6,055 0 0
Stephenson	5,901 0 0

For new studios, Knightsbridge, for Mr. A. S. Lumley. Mr. Henry Shaw, architect. Quantities supplied by Mr. Wm. S. Plimsaul:—

1st Contract.	
Plowman (accepted)	£496 0 0
2nd Contract.	
Plowman (accepted)	£2,150 12 8

For schools for the London School Board, Cook's-ground, Chelsea:—

Myers & Son	£6,450 0 0
Hill & Son	6,140 0 0
Nightingale	6,050 0 0
Peto, Brothers	6,015 0 0
Carter & Son	5,999 0 0
Browne & Co.	5,998 0 0
Newman & Co.	5,976 0 0
Wigmore	5,106 0 0

For rebuilding Nos. 31 and 32, Throgmorton-street, City, for Messrs. Cohen & Sewell. Mr. E. A. Gruning, architect. Quantities by Mr. James Barnett:—

Perkins	£15,950 0 0
Myers & Sons	15,594 0 0
Jackson & Shaw	14,714 0 0
Trollope	14,648 0 0
Perry & Co.	14,396 0 0
Holland & Hannen	14,255 0 0
Ashby & Horner	14,008 0 0
Conder	13,980 0 0
Ashby & Sons	13,968 0 0
Henshaw	13,390 0 0
Browne & Robinson	13,196 0 0

For rebuilding Nos. 12 and 13, Copthall-court, for Messrs. Cohen & Sewell. Mr. N. S. Joseph, architect. Quantities by Mr. S. Wilson:—

Myers & Sons	£16,784 0 0
Jackson & Shaw	16,430 0 0
Trollope	16,223 0 0
Holland & Hannen	16,386 0 0
Perkins	15,777 0 0
Perry & Co.	15,540 0 0
Ashby & Horner	15,147 0 0
Ashby & Son	14,897 0 0
Conder	14,835 0 0
Henshaw	14,235 0 0
Browne & Robinson	14,182 0 0

For both the preceding jobs:—

Myers & Sons	£33,990 0 0
Perkins	33,072 0 0
Trollope	32,698 0 0
Holland & Hannen	32,493 0 0
Perry & Co.	31,503 0 0
Jackson & Shaw	31,086 0 0
Conder	30,609 0 0
Ashby & Horner	30,458 0 0
Ashby & Son	29,788 0 0
Henshaw	29,220 0 0
Browne & Robinson (accepted)	28,656 0 0

TO CORRESPONDENTS.

Chiselborough.—We have received another letter from the Rector of Chiselborough; but as it is for the most part a reiteration, and would moreover force us again to reply, we have not printed it.

J. F. (we cannot pretend to teach him his business).—W. W.—A. H.—C. P. B.—E. F.—D. B.—T. B.—M. P.—G. T. C.—F. W.—L. B. L.—B.—H. S.—W. H. T.—M. & K.—F. M. P.—B. & B.—Amicus.—G. G. S.—J. J.—D. & D.—J. M. G.—H. S. S.—T. B.—London Foreman.—A Foreman.—T. R. T.—G. D. T.—Mr. S.—C. H. G.—J. B.—J. H. B.—W. B. jun.—H. T. E.

We are compelled to decline pointing out books and giving addresses.

All statements of facts, lists of tenders, &c., must be accompanied by the name and address of the sender, not necessarily for publication.

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MR. RYDE, of Parliament-street, Westminster, is in WANT of a DETAIL CLERK. He must be respectable, punctual, and industrious; must write a good hand, be competent to make plans and estimates of buildings, be quick and accurate enough at figures to work out valuations, and must have had general experience in the work of a Surveyor's Office.

Applications, stating salary required, must be made by letter only.

TO CLERKS of BOARDS, RETIRED NON-COMMISSIONED OFFICERS of ENGINEERS, and OTHERS.—WANTED, an INSPECTOR of NUISANCES for the Rural Sanitary District of Epsom, in the county of Surrey, at a salary of 200*l.* a year. The district has an area of 36,791 acres, and contains about 34,012 inhabitants. The appointment will be from year to year, subject to three months' notice on either side. The Inspector will be required to reside at some place within the district, to be approved of by the Sanitary Authority, and must devote the whole of his time to the duties of his office.

Applications, in the candidate's own handwriting, stating age and present and previous employment, with testimonials as to character and qualifications to be sent to me at any time within three weeks from this date.—By order,
HENRY S. AVELINE,
Clerk to the Rural Sanitary Authority for the District of Epsom.
Epsom, Surrey, January 15th, 1873.

NANTWICH UNION.—RURAL SANITARY AUTHORITY.—An INSPECTOR of NUISANCES is required for the Rural District of the Nantwich Union, in the county of Chester, comprising an area of 96,534 acres, and a population of 26,629. The salary will be 300*l.* per annum, and the person appointed will be required to reside at such place within the district as the Rural Sanitary Authority shall approve, to devote the whole of his time to the duties of the office, and to provide and keep a horse at his own expense. The Inspector will be required,—

1. To make a perfect sanitary survey of the whole district, including the sewerage systems and water supply of all the villages and places containing a collection of houses under the jurisdiction of the Rural Sanitary Authority of the Nantwich Union, and report generally on its condition and requirements.

2. To perform the duties of Inspector of Nuisances 'set forth in the order of the Local Government Board dated the 11th day of November last, or as may be contained in such other orders or by-laws as that Board may from time to time issue or sanction.

The appointment will be subject to the approval of the Local Government Board, and, in the first instance, will probably be made for a term of two years. Candidates are requested to send applications (in writing) to me, stating age, residence, and past and present occupation, with recent testimonials as to qualifications and character, on or before the 31st day of JANUARY instant, and the candidates selected will receive notice to attend on the day of election.

JAMES FICK, Clerk to the Rural Sanitary Authority.
Nantwich, 4th January, 1873.

WEST BROMWICH.—SURVEYOR.—The West Bromwich Improvement Commissioners will, on the 6th of FEBRUARY next, APPOINT a SURVEYOR, who will be expected to give his whole time to the service of the Board, and will be required to reside in the parish. Salary, 250*l.* per annum, with use of horse and trap.—Applications, stating age, and enclosing testimonials, must be sent under cover, endorsed "Surveyor," to me at my Offices, Paradise-street, West Bromwich, on or before the 21st JANUARY inst. CHARLES H. BAYLEY, Clerk.
January 2nd, 1873.

BOROUGH of BOLTON.—WANTED, in the Borough Surveyor's Office, a PERSON competent to make TOWN SURVEYS. Must be a good draughtsman. Salary two guineas per week. Application, with testimonials as to fitness for this class of work, to be addressed to the undersigned not later than the 20th instant. J. PROCTOR, Borough Surveyor.
January 15th, 1873.

BOROUGH of BLACKBURN.—The Corporation of this Borough require the services of a DRAUGHTSMAN for the BOROUGH SURVEYOR'S DEPARTMENT, competent to perform the following duties:—To make surveys, take levels, make plans, sections, specifications, and estimates, for sewerage and paving works. To measure the same for contractors, and also apportion the cost to the property owners. Generally to perform all duties required by the Borough Surveyor, under whose direction and control he will be placed, and to devote the whole of his time to the duties of the office. N.B.—The applicant must not be more than forty years of age. The salary will be 100*l.* per annum. Applications, with testimonials, endorsed "Application for Draughtsman," to be sent to the Town Clerk, Town Hall, Blackburn, not later than TWELVE at noon, on MONDAY, the 27th instant.—By order,
C. G. H. BECK, Town Clerk.
Town Clerk's Office, Town Hall, Blackburn, January 9th, 1873.

MALVERN LOCAL BOARD.—WATER-WORKS EXTENSION.—A CLERK of WORKS is WANTED for three months, from the 3rd of February next, to SUPERINTEND the ERECTION of a COVERED RESERVOIR at North Malvern. Preference will be given to a bricklayer by trade, and one having had experience in waterworks. Salary 2*l.* 10*s.* per week. Applications, enclosing testimonials, must be sent under cover, endorsed "Clerk of Works," to me at the Local Board Offices, Malvern, on or before the 27th day of JANUARY, 1873.
WM. WILKES CAWLEY, Clerk to the Board.

TO SURVEYORS.

WANTED, an ASSISTANT SURVEYOR, capable, under supervision, of superintending the carrying out of main drainage and other works, of surveying lands, and taking levels. He must also be a fair draughtsman. His services would be required for a period of from one to three years, at a salary of 120*l.* per annum.—Applications (with testimonials) to be sent to me on or before FRIDAY, the 31st JANUARY, 1873.
Clerk to the Llanelly Local Board of Health.
Llanelly, January 8th, 1873. Town-hall, Llanelly.

TO GLASS WRITERS

WANTED, TWO good OUTLINERS.—Apply at Railway Arch, Blackfriars-road.

WANTED, in a Surveyor's Office, a respectable YOUTH, who can draw and print neatly, and write a good hand.—Apply at 103, Gower-street, W.C.

WANTED, a respectable YOUTH, used to an Architect's Office. Must be a good draughtsman.—Apply, with sample, to Mr. JEFFREYS, 103, Hatton-garden, Holborn.

WANTED.—To GLASS PAINTERS.—EMPLOYMENT is offered to a good FIGURE PAINTER.—W. B. SIMPSON & SONS, Decorators, Glass Painters, &c. 456, West Strand, London, W.C.

WANTED, in a Surveyor's Office, a JUNIOR CLERK, who writes a good hand, and has had some experience.—Address, stating age, salary required, and other particulars, to SURVEYOR, 11, Duke-street, Adelphi, W.C.

WANTED, an experienced London Builder's PRIME-COST CLERK.—Apply by letter, with references to former employers, and stating age and salary required, to U. V. No. 8, Birchin-lane, E.C.

WANTED, a good JOBBING CARPENTER and UPHOLSTERER. To a suitable man a good permanent SITUATION is OPEN.—Address, with references, to A. J. DUCK, Builder and Decorator, Putney, S.W.

WANTED, in a JOBBING SHOP, in the City, a quick and steady Man, CARPENTER and JOINER. Capable of setting out and booking materials. Must thoroughly understand his trade.—Reply by letter, stating age and wages required for a constancy, and references, to A. B. 14, Belgrave-street, South Pimlico.

SHORTHAND CLERK WANTED, for works near Greenwich. One who is acquainted with the engineering or building trades preferred.—Address, by letter, R. P. S. C. No. 276, Mare-street, Hackney, stating salary expected, age, and qualifications.

AN ARCHITECT requires the SERVICES of a really good ASSISTANT.—Address, H. S. S. 22, Southampton Buildings, W.C.

AN experienced SLATER WANTED, with good references.—Address, 409, Office of "The Builder."

TO TRAVELLERS.

AGENT WANTED, to Sell on Commission in the home counties. One who has a connexion amongst builders is desired.—Address, No. 456, Office of "The Builder."

WANTED, EMPLOYMENT, by a first-class JOBBING CARPENTER. Thoroughly understands the usual routine of a decorator's and upholsterer's shop. Well up at bench, fixing, alterations, &c.—Address, A. Z. 6, York-terrace, High-street, Clapham, S.W.

WANTED, EMPLOYMENT, by an experienced PAINTER (who is handy at paper-hanging, graining, gilding, and the pencil), as WORKING FOREMAN, or otherwise. Aged 25.—Address, J. P. 28, May-street, North End, Fulham, S.W.

WANTED, EMPLOYMENT, by a CARPENTER and JOINER. Used to counting-house framing. Has a good knowledge of plans, specifications, and accounts. Jobbing, general, and blinds of all descriptions.—Address, W. 51, Bessborough-place, Pimlico, S.W.

WANTED, EMPLOYMENT, by a general good handy JOBBING MAN, aged 27, who is well up in all house repairs, and in general jobbing work, as PLUMBER, PAINTER, GLAZIER, and ZINCWORKER. Will make himself generally useful, and fill up time in anything required. Wages, 6*d.* per hour.—Address, JOHN, 46, Boston-place, Dorset-square, N.W.

TO BUILDERS AND OTHERS.

WANTED, PLAIN and ORNAMENTAL PLASTERING, in Town or country. Material and labour, or labour only. First-class references.—Address, J. K. 18, Henry-road, St. Ann's-road, Stamford-hill, Tottenham.

WANTED, a SITUATION, as TRAVELLER for a LIME or BRICK MERCHANT. First-class references.—Address, H. E. Y. Mr. Paine's Brush Warehouse, Stoke Newington-road.

TO IRONMONGERS AND BUILDERS.

WANTED, a SITUATION, as GENERAL SMITH, BELLHANGER, GASFITTER, &c.—D. F. 19, Newnham-street, Edgeware-road, W.

WANTED, a SITUATION, as STOCK and TIME KEEPER, in a good Building Firm. Can trace or copy plans. Eight years with last employers.—Address, E. K. Rattenbury's, Amhurst-road, West Hackney.

TO BUILDERS AND CONTRACTORS.

WANTED, a SITUATION, as FOREMAN. Understands buildings and repairs, from foundation to completion, measuring, estimating, and book-keeping.—Address, ARGUS, care of Mr. Cannon, 6, Duke-street, Lincoln's-inn-fields.

TO PLUMBERS, BUILDERS, &c.

WANTED, a SITUATION or JOB, in Town or country, as PLUMBER, GAS and HOT-WATER FITTER, and PLAIN ZINC-WORKER. Good reference.—Address, T. W. care of Mr. Clark, 4, Old-road, Stepney, E.

TO IRONMONGERS, &c.

WANTED, a SITUATION, by a young Man, as GASFITTER, SMITH, WHITESMITH, &c. Well up in hot-water work. Good references if required.—Address, H. R. No. 4, Chapel-road, Stamford-hill, Middlesex.

WANTED, a SITUATION, by a first-class PLUMBER, PAINTER, and LEAD LIGHT GLAZIER. Well understands all kinds of pump, closet, and bath work of every description, and willing to make himself generally useful. Good references given.—Address, J. SNOW, 241, Edgware-road, W.

WANTED, an ENGAGEMENT, as CLERK of the WORKS or GENERAL FOREMAN.—Address, W. B. care of Mr. Simmons, 29, New Bridge-street, Blackfriars.

TO ARCHITECTS.

WANTED, an ENGAGEMENT, by a really good DRAUGHTSMAN. Well versed in construction and perspective. Salary moderate.—Address, T-SQUARE, Post-office, Nelson-street, Greenwich, S.E.

TO ARCHITECTS, SURVEYORS, AND BUILDERS.

WANTED, an ENGAGEMENT, temporary or occasionally, in Town or country, by a first-class QUANTITY-TAKER, MEASURER, and DRAUGHTSMAN. Well versed in dilapidations. Twelve years' experience. Highest references. Terms moderate.—Address, SURVEYOR, 194, Gray's-inn-road, W.C.

TO BUILDERS AND CONTRACTORS.

WANTED, a RE-ENGAGEMENT, by a thoroughly practical Man, as GENERAL OUT-DOOR WORKING FOREMAN. Carpenter by trade. Satisfactory reference from his last employers.—Address, 417, Office of "The Builder.

TO GENTLEMEN AND BRICKMAKERS.

WANTED, a RE-ENGAGEMENT, to Dig, Make, and Burn CLAMP or KILN BRICKS, and Take entire charge of a Brick-yard, at per thousand, large or small quantities. Twenty-five years' experience. Good reference.—Address, A. B. care of Mr. Pearce, 24, High-street, Tunbridge Wells.

WANTED, a RE-ENGAGEMENT as FOREMAN of BRICKLAYERS or CLERK of WORKS, or to take Charge of a Job. Good references from present employers. Address, A. W. Mrs. Cope, Upper Pearpoint-street, Sneinton, Nottingham.

TO BUILDERS, &c.

WANTED, STAIRCASE or JOINER'S WORK, by the Piece (labour only), by a young Man of good experience. Town or suburbs preferred.—Address, H. W. 11, Culvert-road, Battersea Park, S.W.

TO ARCHITECTS AND SURVEYORS.

WANTED, by one who has completed his Articles, an ENGAGEMENT, in an Architect's or Surveyor's Office, as JUNIOR ASSISTANT.—Address, J. T. Post-office, Clapham Rise.

TO PLUMBERS AND BUILDERS.

WANTED, by a thoroughly good Plumber and Plain Zincworker, a SITUATION or JOB. Well up in all branches of plumbing.—Address, C. Plumber, 96, Bayham-street, Camden-town, N.W.

TO BUILDERS, CONTRACTORS, &c.

WANTED, by the Advertiser, an ENGAGEMENT as JUNIOR CLERK, TIME and STORE KEEPER. Has had experience both in the office and workshop.—Address, G. E. 27, Haberdasher-street, Hoxton, N.

TO BUILDERS AND OTHERS.

WANTED, by the Advertiser, a RE-ENGAGEMENT as JOINER'S MACHINIST. Can make cutters, and do repairs if required.—Address, J. HERBERT, 94, Great Hermitage-street, Wapping, London, E.

TO ARCHITECTS AND SURVEYORS.

WANTED, by the Advertiser, an immediate ENGAGEMENT, as JUNIOR ASSISTANT. Aged 21. Four years' experience. Principal objects improvement and permanent employment.—Address, Y. 30, Warwick-street, New-cross, S.E.

TO BUILDERS, &c.

WANTED, by the Advertiser, a SITUATION as CLERK and GENERAL ASSISTANT. Aged 24. Used to the general routine of the office. Good references.—Address, P. C. 13, Warner-street, Barnsbury, N.

WANTED, by the Advertiser, aged 21, a RE-ENGAGEMENT in an ARCHITECT'S OFFICE. Can prepare plans, &c. and trace neatly. Seven years' reference from present employer.—Address, No. 481, Office of "The Builder."

WANTED, by the Advertiser, an ENGAGEMENT as ARCHITECTURAL DRAUGHTSMAN. Is a good colourist, and can give seven years' reference with last employer. Temporary assistance given if required.—Address, Z. Z. No. 13, Chippenham-terrace, Harrow-road, Paddington, W.

TO SPECULATING BUILDERS.

WANTED, by the Advertiser (having a small capital), JOINER'S WORK. Materials and labour, or labour only. The country preferred. Would take the management of an estate.—Address, No. 555, at C. H. May's General Advertising Office, 78, Gracechurch-street, E.C.

TO DECORATORS AND BUILDERS.

WANTED, by an energetic and practical Man, with twenty years' first-class experience in the painting and decorating, with a thorough knowledge of general repairs, a SITUATION as FOREMAN or MANAGER, in a decorative and building establishment. — Address, FRANKS, 12, Morton-street, Pimlico, S.W.

WANTED, by an ARCHITECTURAL DRAUGHTSMAN and good Colourist, aged 26 years, a RE-ENGAGEMENT in London. Drawings from instructions. Detail, construction. Principally versed in Italian design. Terms, 45s. per week.—Address, OMEGA, 4, Rodney-street, Pentonville, N.

TO ARCHITECTS AND SURVEYORS.

WANTED, by a competent DRAUGHTSMAN and good GENERAL ASSISTANT, an ENGAGEMENT. Competition, working, or detail drawing. Good colourist. First-class references.—Address, ALPHA, 1, Albert-place, Edwardes-street, Balsall Heath, Birmingham.

TO ARCHITECTS AND SURVEYORS.

WANTED, by an ASSISTANT, a RE-ENGAGEMENT. Ten years' experience in London offices.—Mr. RITTY, Duncon's Newsrooms, Londenhall-street, E.C.

TO CONTRACTORS AND BUILDERS.

WANTED, by an experienced CLERK, a RE-ENGAGEMENT, as DRAUGHTSMAN or BOOK-KEEPER. Good references.—Address, A. B. 90, Queen-street, Cheapside, E.C.

TO CARPENTERS AND JOINERS.

WANTED, by a young Man, aged 25, a SITUATION as IMPROVER to the CARPENTERING and JOINERY. Has had three years' experience at the trade.—Address, W. G. 44, Westbourne-street, Sloane-square, S. W.

WANTED, by a young Man, aged 18, a SITUATION in an Office, as JUNIOR CLERK, MESSENGER, or any similar capacity of trust and confidence. Three years' experience. Good references.—Address, stating terms, F. F. Housekeeper, 11, Burleigh-street, Strand.

TO BUILDERS AND OTHERS.

WANTED, by a respectable young Man, a SITUATION, as IMPROVER, in CARPENTERING and JOINERING. Five years in the trade.—Address, J. N. 606, Wandsworth-road, Clapham.

TO MASTER PLUMBERS, BUILDERS, AND OTHERS.

WANTED, by a steady young Man, a SITUATION as IMPROVER to the PLUMBING. Can do plain zincworking, and a little gasfitting, and is willing to make himself generally useful. Good references.—Address, A. C. 2, Robert-street, Brixton, S.W.

TO PLUMBERS, BUILDERS, &c.

WANTED, by an experienced PLUMBER, a constannt SITUATION or JOB. Task-work taken.—Address. H. H. care of Mr. Scott, 11, Rudell-street, Long-acre.

TO BRICK AND TILE MASTERS.

WANTED, by an experienced Man, a RE-ENGAGEMENT as FOREMAN in a BRICK and TILE YARD. To take work by per 1,000. Scotch or Clamp Kiln, or the management of Hoffman's Patent Kiln. Good references given.—Address, G. READ, Carfax-street, New Swindon, Wilts.

TO BRICK MANUFACTURERS AND OTHERS.

WANTED, by an experienced Man, a SITUATION as MANAGER or FOREMAN in a BRICK-FIELD, or in any occupation as superintendent of out-door labour. First-class references can be given as to character and capability. Address, S. T. Post-office, Hayes, near Uxbridge.

TO PLUMBERS.

WANTED, by a Person, 18 years of age, a SITUATION as IMPROVER in the PLUMBING TRADE. Has served four years. Please state wages and terms.—Address, A. Z. Post-office, Lytham.

TO PLUMBERS.

THE Advertiser wishes a SITUATION as IMPROVER in the PLUMBING. Has been in the trade eight years.—Address, M. H. 20, Swan-street, Minories.

THE Advertiser wishes for a RE-ENGAGEMENT as FOREMAN of CARPENTERS, or to Take Charge of a Small Job. Country not objected to. Aged 31. Good references.—Apply or address to L. W. 15, Turner-street, Commercial-road, E.

TO SAW-MILL PROPRIETORS, BUILDERS, &c.

THE Advertiser is open to a RE-ENGAGEMENT, as FOREMAN, TIMEKEEPER, CLERK, &c. Can work a frame. Five years' reference.—Address, W. 26, Edgar-road, Bromley-by-Bow, E.

TO ENGINEERS AND SURVEYORS.

THE Advertiser, possessing sound practical and theoretical knowledge, is a good draughtsman, mathematician, and has a fair knowledge of chemistry and physics, is desirous of a POSITION where his knowledge would be of service. Aged 26. Address, P. Q. R. 4, Pigott-street, East India-road, Limehouse, E.

STAIRCASING, HANDRAILING, or JOINERY of any Description. Labour, Material, and Fixing, together or separate. Will Tender under Architect for first-class work, or Take Private Contract in Town or country, and prepare plans if required. Materials and workmanship guaranteed, and prices low.—Address, F. J. B. 507, Liverpool-road, N.

TO BUILDERS, CONTRACTORS, &c.

RE-ENGAGEMENT WANTED, by a thoroughly efficient CLERK. Has had the control of a jobbing builder's business. Excellent references. Town or country.—Address, 442, Office of "The Builder."

QUANTITY SURVEYOR and MEASURER, of upwards of twenty years' experience, practically acquainted with building, offers ASSISTANCE. Terms as agreed. Disputed and other builders' accounts arranged.—Address, SURVEYOR, 28, Thornton-street, Brixton-road, S.W.

PAVING. — The Advertiser, having just completed the Paving of about eight miles of Tramway, is prepared to undertake large or small JOBS in PAVING and STREET MASONRY, finding tools and labour. Town or country.—Address, J. CRUTCHLEY, 7, James-place, North-street, Poplar, E.

TO BUILDERS AND CONTRACTORS.

MANAGER. — The Advertiser, who can give every satisfaction with regard to character and ability, is desirous of an ENGAGEMENT as MANAGING CLERK.—Address, BETA, 25, York-street, London-road, S.E.

CONTRACTOR'S or BUILDER'S CLERK and ASSISTANT. Will shortly be open to an ENGAGEMENT. A good draughtsman and measurer, with a thorough knowledge of all the branches of the building trade.—Address, 98, Keith & Co. No. 65, George-street, Edinburgh.

A GENERAL FOREMAN wishes for a RE-ENGAGEMENT, in London or S.E. preferred. Joiner by trade. Just finished a job in London. Age 35.—Address, A. B. Post-office, Penge, S.E.

TO CIVIL ENGINEERS, LAND AGENTS, AND SURVEYORS.

AN experienced SURVEYOR and first-rate DRAUGHTSMAN desires an immediate ENGAGEMENT. Address, No. 427, Office of "The Builder."

AN ENGINEER, of general experience in Surveying, Levelling, Plotting, Taking out Quantities, Parliamentary Work, &c. is desirous for an ENGAGEMENT, either permanent or temporary. Good references.—Address, F. G. Post-office, Millbank-street, Westminster.

TO ARCHITECTS.

AN experienced DRAUGHTSMAN, aged 26 years, wishes for PERMANENT EMPLOYMENT. Well up in church work. Good reference.—Address, S. T. care of Mrs. Seymour, South-street, Bishop's Stortford, Herts.

A JUNIOR ASSISTANT desires an ENGAGEMENT in an Architect's Office. Moderate salary only required.—Address, W. G. F. 8, Gloucester-road, Peckham, S.E.

A FIRST-CLASS ASSISTANT, thoroughly versed in design, details, working drawings, &c. offers his SERVICES.—Address, X. L. Smith's, 11, Duke-street, Adelphi.

AN ASSISTANT is at liberty for RE-ENGAGEMENT. Aged 23. Salary moderate—Address, A. B. care of Mrs. Wheatley, Bratt-street, West Bromwich.

TO ARCHITECTS, SURVEYORS, &c.

AN ASSISTANT, of many years' experience in official and private practice, desires an ENGAGEMENT as MANAGING CLERK, or otherwise,—Address, No. 28, Office of "The Builder."

TO ENGINEERS, SURVEYORS, &c.

AN ASSISTANT, experienced SURVEYOR and LEVELLER, is open to an ENGAGEMENT, either temporary or otherwise. Is a neat draughtsman. Can give good references. Terms moderate.—Address, J. P. K. 19, Norfolk-street, Glossop, Derbyshire.

AN ASSISTANT, of many years' experience, a first-class Designer in Classic or Gothic, and practical Man, is open to an ENGAGEMENT, in Town, temporary or otherwise. First-class perspective draughtsman and good colourist, and thoroughly experienced in competition work.—Address, I. X. care of Mr. Morris, Newmgent, Camberwell-green, S.E.

TO ARCHITECTS AND SURVEYORS.

AN experienced practical ASSISTANT is desirous of meeting with an ENGAGEMENT as MANAGER, for a permanency. Is an excellent draughtsman (Italian and Gothic). Well understands quantities, specifications, and surveying.—Address, No. 406, Office of "The Builder."

A THOROUGH ESTIMATING, MEASURING, and GENERAL CLERK, aged 25, who has a practical knowledge of the trade, and well experienced in arranging complicated accounts, desires an ENGAGEMENT. Temporary not objected to.—Address, X. Y. Z. 4, Sydney-place, Sydney-street, Goswell-road.

A FIRST-CLASS ESTIMATING and MEASURING CLERK, well versed in Builders' and Contractors' Accounts, and capable of Taking the Management of an Office, requires an ENGAGEMENT. Thoroughly efficient in every respect. References, &c. unexceptionable.—Address, A. B. Penny's Bazaar, Sandringham-road, Dalston.

TO ARCHITECTS AND SURVEYORS.

A YOUNG MAN, aged 19, is desirous of being ARTICLED to an ARCHITECT and SURVEYOR in good practice.—Address, stating terms, Y. Post-office, Macclesfield.

A YOUNG MAN wants EMPLOYMENT at the GRAINING, &c. Has had good experience. Wages moderate.—Address, F. M. 42, Rathbone-place, Oxford-street, W.

TO BUILDERS.

A YOUNG MAN is in WANT of a SITUATION as IMPROVER in PLASTERING. Can turn his hand to slating.—Address, W. A. 21, Huntsworth-mews South, Dorset-square, N.W.

AN experienced PLUMBER, PAINTER, and GLAZIER is in WANT of a JOB, or would Take a Permanent Situation at moderate wages.—Address, PLUMBER, 6, Blandford-street, Portman-square, W.

TO CONTRACTORS, WATER COMPANIES, &c.

A THOROUGHLY practical FOREMAN, having just completed some large waterworks abroad, is open to a similar ENGAGEMENT at home or abroad. Also a good knowledge of drainage works. Fifteen years' first-class references.—Address, C. R. 16, Chippenham-terrace, Harrow-road, W.

TO BUILDERS AND CONTRACTORS.

A THOROUGHLY practical GENERAL FOREMAN requires a RE-ENGAGEMENT, to Take the entire Charge of a Job. Town or country. Carpenter and joiner by trade. Good references. — Address, W. 169, Cambridge-street, Pimlico, S.W.

TO ENGINEERS, ARCHITECTS, &c.

A SITUATION WANTED, by a good DRAUGHTSMAN. Practically acquainted with building construction, surveying, &c. Country not objected to.—Address, B. No. 41, Newington Green-road, N.

TO BUILDERS, IRONMONGERS, AND OTHERS.

AN experienced WORKMAN wishes for a SITUATION as GASFITTER and BELLHANGER. Well up in jobbing work. Understands hot-water work. Good references.—Address, H. W. 28, Dragon-road, St. George's-road, Camberwell.

AS WORKING FOREMAN of MASONS, Carver and Letter-cutter in Monumental Business, Mason on Gentleman's Estate, or any position requiring ability, confidence, and sound experience of general building operations. Satisfactory references. Town or country.—Address, T. M. Post-office, Burton-crescent, London, W.C.

A YOUNG GENTLEMAN, having served five years with one of the largest building contractors in London, and who now holds a good position in an Architect's Office, and a student of the Architectural Association, is desirous of obtaining a SITUATION as ASSISTANT, in a Surveyor's Office. Can draw well, is competent to make out plans, quick and accurate at figures, and practically understands building. The highest references, and any further particulars will be given, by applying to SURVEYOR, Post-office, Curzon-street, May Fair, W.

TO MASTER PLUMBERS OR BUILDERS.

A RESPECTABLE young Man wishes to meet with a JOB, or a Constancy. Is a thoroughly good plumber, and if required can turn his hand to other branches. The highest references can be given to last employer.—Address, H. H. 1, Little Marylebone-street, Marylebone, London, W.